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TEACHERS' CONCEPTIONS OF THEIR ACTIONS WITH STUDENTS ON PLACEMENT

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‘Nosce Te’

‘Know Thyself’

ABSTRACT

School-based teaching placements have a central place in Initial Teacher Education [ITE]. The classroom teachers to whom student teachers are assigned play a role in shaping students' practice and may impact on these students' learning, confidence and competence. The questions then arise of:

- what expectations do classroom teachers have of students?;
- how do they represent their actions with students?;
- what do they see as key matters for students on placement?

This thesis has engaged with these issues with a focus on mathematics teachers in secondary schools. It reports on a study which was guided by the following research question: *How do mathematics teachers in Scottish schools conceptualise their actions with students on placement?*

The Literature Review locates this study within policy frameworks for school placement and a range of relevant literature. This review reveals longstanding concerns about the quality of student placements and the assessment of student practice, alongside evidence that professional development for supervisors in their role of inducting students into the profession remains inadequate. There is thus much work yet to be done in this area. It is argued in the thesis that future developments in ITE will gain from being informed by a clearer understanding of how classrooms teachers themselves conceptualise their actions with students on placement, an area which is currently insufficiently understood.

This study set out to contribute to bridging this gap by exploring the thinking of a sample of teachers in relation to the actions they undertake with students who are assigned to their classrooms. It was largely guided by a Constructivist Guided Theory methodology (Charmaz, 2014). A pilot study laid the groundwork for the main study in which semi-structured interviews were conducted with a total of 22 teachers drawn from secondary school mathematics departments across the East of Scotland known to have recently hosted a student on placement. The data from these interviews were analysed using the Constructivist Grounded Theories procedures of initial and focused coding. In the final stage of analysis the main categories that had emerged from these process of coding were then subsumed under Wenger's (1998) 'Communities of Practice' framework. Employing this framework allowed a clear, synoptic picture of the findings to be presented and brought into the foreground issues that have received little attention in preceding work.

From the substantive findings, five categories were selected for discussion. This selection was based on their contribution to both addressing the research question and to the framework used. In addition, Brookfield's (2017) critically reflective lenses were applied to these categories, exposing these teachers' assumptions concerning student placements and teacher education.

LAY SUMMARY

Why was this study needed?

This thesis reports on a study of classroom teachers' conceptions of their interactions with student teachers that was conducted in Scotland. Although school-based teaching placements have a central place in Initial Teacher Education [ITE], both Scottish policy documents and the international literature highlight longstanding issues with this aspect of ITE. These issues include: placement quality; the assessment of students' practice; and the absence of clearly defined roles and responsibilities for the staff involved.

In reading the policy documents, I observed that too many had been written for those in positions of authority, with a top-down approach taken to actions, such as cementing teachers' work with students into a contractual obligation. Teachers' own perspectives were given scant attention.

Preceding research has tended very much to focus only on those teachers who have a formally recognised role in supporting student teachers; and it does not fully recognise and appreciate all the work undertaken by teachers as a whole in relation to student placements. In the secondary school context, where this study was based, it is customary for students to be supported by numerous teachers, not just the appointed supervisor, to ensure exposure to a range of classes and courses. The current study set out to address this gap.

Focus of the study

This study aimed to take a fresh look at the placement experience from the *teachers' perspective* by exploring their conceptions of their interactions with students on placement to gain a sense of their purposes and the reasons for their actions. It was guided by the research question: *How do mathematics teachers in Scottish schools conceptualise their actions with students on placement?*

What did the study involve?

The 18 teachers, (9 men and 9 women), who participated in this study varied in their years of teaching experience. They were drawn from 9 mathematics departments across the East of Scotland known to have recently hosted a student on placement. Semi-structured interviews provided the participants with the opportunity to share their views and reflect upon their experiences.

These interviews were fully transcribed and key themes in these transcribed texts were identified through a lengthy process of close analysis. Wenger's (1998) 'Communities of Practice' framework was then used to bring these themes together and to give a clear, coherent overview of the findings of the study. (Wenger's Communities of Practice framework provides a comprehensive account of learning that centres on how learning and the development of identity are intertwined with social participation in the practices of a particular community or professional group.) The findings were also examined using Brookfield's (2017) scheme of critical reflection to identify assumptions that informed the teachers' actions.

Key findings of the study

The study produced a substantial body of findings. The findings that most centrally addressed the research question are summarised under five categories. These categories are teachers' conceptions of:

- students shadowing them as they go about their daily work;
- their discussions with the student that occurred after they had observed the student teaching a lesson;
- the assessment of a student's competency over the placement period;
- the theoretical aspects of practice covered during the university-based blocks; and
- the detailed plans of 'what, when, and how' a student will deliver each lesson to their classes.

Elements of Wenger's (1998) Communities of Practice framework enabled a fine-grained picture to be painted of teachers:

- fine-tuning their support to students in response to their individual trajectories of development as a teacher; and
- guiding students' next steps, based on close observation of the gaps in each student's knowledge and performance.

In other words, there was a dynamic, responsive character to the participants' reported interactions with students. They were not simply following a well-worn guidebook.

Viewing the findings using Brookfield's (2017) critically reflective lens revealed the influence certain deep-rooted assumptions have on teachers, resulting in a rejection of aspects of ITE rather than a demand for greater involvement. These assumptions included the beliefs that:

- the theory covered during the university-based component of the course does not connect with the school-based placement experience;

- there is no need to discuss their practice with students after a student has observed them teaching.
- a positive outcome for a student's placement is the individual teacher's responsibility.

Implications of the study

The overall findings of this study clearly indicate that if future policy recommendations are to achieve success, they will need to take account of teachers' dynamic, fluidly shifting interactions with students. This particularly applies to the construction of any future contractual obligation on teachers to work with students. Such a contractual obligation will require to be carefully crafted to foster the benefits of the existing interactions between teachers and students and to avoid setting out a prescriptive template.

Furthermore, the assumptions this study has revealed build a case for nesting professional development concerning student placements within a wider, radically structured programme of professional development that needs the genuinely collaborative involvement of both teachers and university tutors.

Contributions to research

As this study investigated a limited number of mathematics teachers in secondary schools, it is possible only to claim deliberately modest generalizations to teachers who are working within very similar structures and cultures (Williams, 2002). However, its findings may provide useful points of comparison for future researchers; and importantly it has cast an analytical, critical eye on assumptions surrounding student placements and offered fresh perspectives that may guide future work.

DECLARATION

I declare that this thesis has been composed by myself, that the work is my own, and that the work has not been submitted for any other degree of professional qualification.

Signed: _____.

Date: _____.

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From starting the EdD to completing this thesis would not have been possible without the help and support of so many people.

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List of Abbreviations:

<i>BERA</i>	British Educational Research Association
<i>CAEP</i>	Council for the Accreditation of Educator Preparation
<i>CGT</i>	Constructivist Grounded Theory
<i>CoP</i>	Communities of Practice
<i>CPD</i>	Continuous Professional Development
<i>DfE</i>	Department for Education
<i>GT</i>	Grounded Theory
<i>GTCS</i>	General Teaching Council for Scotland
<i>HEFC</i>	Higher Education Funding Council
<i>HEI</i>	Higher Education Institute
<i>HIGOS</i>	How Good Is Our School?
<i>HMIE</i>	HM Inspectorate for Education
<i>ITE</i>	Initial Teacher Education
<i>ITT</i>	Initial Teacher Training
<i>LNCT</i>	Local Negotiating Committee for Teachers
<i>NQT</i>	Newly Qualified Teacher
<i>PD</i>	Professional Development
<i>PDP</i>	Professional Development Portfolio
<i>PDS</i>	Professional Development Schools
<i>PGDE</i>	Postgraduate Diploma in Education
<i>QTS</i>	Qualified Teacher Status
<i>SCDE</i>	Scottish Council of Deans of Education
<i>SCRE</i>	Scottish Council for Research in Education
<i>SED</i>	Scottish Education Department 1872 – 1991
<i>SEED</i>	Scottish Executive Education Department 1999 – 2007
<i>SOED</i>	Scottish Office Education Department 1991 – 1995
<i>SOEID</i>	Scottish Office Education and Industry Department 1995 – 1999
<i>STEC</i>	Scottish Teacher Education Committee
<i>UKMT</i>	United Kingdom Mathematics Trust
<i>ZPD</i>	Zone of Proximal Development

Chapter 1 Introduction

1-1 The Tradition of Initial Teacher Education

Initial teacher education in Scotland has a long, strong tradition of providing high quality teachers for Scottish schools.

(Donaldson, 2011, p.31).

While it can be a matter of pride to be part of the Scottish teaching profession when reading this and similar quotations, it can also produce a complacent attitude that the teaching profession need do no more. However, from my own professional experiences, I caution against such complacency.

As will be demonstrated in this thesis, over the last 75 years Scottish policy documents have identified the same issues with the student placement within Initial Teacher Education [ITE]. The persistence of issues with placement quality, student assessment, and roles and responsibilities suggest that these issues have not been satisfactorily resolved at the 'chalkface'.

As the following Literature Review will reveal, the issues raised in these policy documents have been identified not only in Scotland but also in other countries. While numerous studies have been conducted around supervisors, (i.e. teachers who have a formally assigned supervising and assessing role), and students on placement, I was surprised to find that the actions of other teachers with daily contact with a student are largely overlooked.

This study aimed to take a fresh look at the placement experience from the *teachers' perspective* by exploring their conceptions of their 'chalkface' interactions with students on placement to gain a sense of their purposes and the reasons for their actions.

I begin this chapter with an account of the gap in knowledge this study intended to address before introducing the aims of the study along with the

research question, the methodology employed, and a brief outline of the participants.

With the design of this study established, the chapter moves on to describe how my professional experiences sparked an interest in pursuing this topic and then sketches in my observations on the variation in quality of placements I have encountered. The section that follows provides a succinct overview and chronology of relevant Scottish government policy documents to point up the enduring nature of the issues at the centre of this study. (These documents, and in particular the research and development projects triggered by them, are then treated much more fully in the subsequent Literature Review.) As a necessary piece of groundwork, questions concerning the terminology employed across the international literature are raised and the meaning of key terms used in this thesis are clarified. This is followed by a brief outline of both placement information and partnership arrangements for the university in which this study is based. The final section of this chapter outlines the structure of this thesis, presenting a synopsis of each chapter's content.

1-2 Gap in Knowledge

The Literature Review will detail how there has been a considerable body of research on teachers who take on the formal role of supervisor of a student. However, this research has not included all the other teachers who help shape students during placement. This is a significant gap, given that students in secondary schools tend not to be based solely in the classroom of their supervisor. In other words, the research has focused more narrowly on those teachers who have an assigned role as supervisors; the input to students from teachers in general is unrecognised. Therefore, my purpose was to expand the research literature to include these teachers, so we have a more complete 360-degree picture of current practice.

While rooted in the context of Scottish secondary mathematics education, this study has the potential to make an original contribution to a relatively unexplored area.

1-3 The Aims of the Study

Given that the principal aim of this study was to explore teachers' *conceptions* of their actions with students assigned to their class, I entered this research with a broad research question:

How do mathematics teachers in Scottish schools conceptualise their actions with students on placement?

Such a broad exploratory research question required a qualitative methodology, with its focus on questions of '*how*', rather than a quantitative measure of '*how much*'.

With the purpose of exploring how teachers conceive their actions with students, I employed a Constructivist Grounded Theory methodology [CGT].

It was of central importance in this study to listen carefully to the teachers' voices. Uncovering teachers' perceptions, understandings and sense-making concerning the research topic required that I had an open mind, enabling direct engagement with participants to encourage the sharing of their experiences, thoughts and feelings. The use of semi-structured interviews encouraged such an explorative approach.

Semi-structured interviews provided the participant teachers with the opportunity to share their views and reflect upon their experiences with me as the researcher. Together we explored their rationales behind their interactions with students in a reflective atmosphere to determine some of the possibilities and challenges these teachers experienced. Both the location of the interviews and routines before beginning each interview were designed to create a safe and relaxed atmosphere. The interviews were timed to ensure they were conducted in the weeks following a placement so

the participant teachers would have recent experiences that they could reflect on and compare and contrast with earlier experiences.

The teachers who participated in this study were drawn from mathematics departments within state and independent schools across the East of Scotland known to have recently hosted a student on placement. I had previously met all participants while undertaking my role as a university tutor so needed to be very conscious of this influencing both recruitment and data collection.

1-4 What Sparked My Interest in this Topic

My professional interest in this topic began from my first encounter with a student in my classroom, and developed over time, enduring even after I moved to 'the other side' as the university tutor. To assist a reader of this thesis to understand my choice of research methodology and my motivation for conducting the study, I need to share an overview of my philosophical perspective and career.

1-4.1 My Philosophical Perspective

I am very familiar, and comfortable, with the view that learning entails the individual constructing meaning (constructivism) but also through interaction with others and with cultural practices (social constructivism). Social constructivism is a widely accepted philosophy within education, especially in secondary mathematics education, (see Confrey and Kazak (2006), Ernest (1994) and Steffe and Kieren (1994)).

My own epistemological position lies within social constructivism where there is a recognition that multiple realities may exist. I am continuously building on my experience as a teacher and teacher educator in considering how pupils and students think, feel and act as a result of exposure to various experiences. Every interaction with pupils or students deepens my

understanding of pupils' perceptions of mathematics or students' perceptions of teacher education.

1-4.2 My Background

I move on now to give an overview of my career. This is important as the focus of this research was directly related to questions formed during my career (Creswell, 2013).

Having undertaken a mathematics degree straight from school, I immediately completed the postgraduate diploma in education [PGDE] so as to be able to teach secondary mathematics. This decision had less to do with a desire to teach and more to do with the necessity for a regular wage.

I had always resisted teaching as a career, mostly because this pathway was expected of me. However, not only did I find the daily challenges and diversity very interesting and stimulating, but the support of colleagues across my school and its hierarchy gave confidence to my practice in school and enabled my professional growth. They supported me through a part-time master's course I undertook alongside my full-time teaching post, and encouraged my onward journey as a teacher educator: first, in a part-time secondment to undertake placement visits as the university tutor, and then in a full-time secondment as a lecturer. To maintain a connection with my teacher identity, I became heavily involved with the United Kingdom Mathematics Trust [UKMT], a charity running school mathematics competitions. Through the full-time secondment, I was lucky enough to join another supportive group of colleagues and my confidence developed enough to begin a doctorate.

At the end of this secondment, I accepted a Senior Lecturer post in England. My motivation behind moving to the post in England was to gain relevant experience to inform my understanding of the similarities and differences between the English system of *Initial Teacher Training [ITT]* and the Scottish system of *Initial Teacher Education [ITE]*. As I developed an appreciation of

these similarities and differences, I revisited questions around how mathematics teachers work with students, questions that had originally formed when I had my first student in my classroom. I became increasingly concerned about: the variations in the degree to which students are welcomed into departments; the amount of goodwill from teachers that universities rely on; and my frustration at policy formation that makes no acknowledgement of the distinct differences in structure between primary and secondary placements. Looking for answers within the literature, I discovered that existing research focussed upon those with a designated responsibility, such as the supervisors, with little, if any, reference to the assortment of teachers a student encounters on placement. After three years immersed in the English education system, I returned to Edinburgh to complete my doctorate feeling it had become essential to explore teachers' support of students.

My background as a teacher and teacher educator enables me to write from a standpoint where I understand the complexities of teaching and of developing the practice of those less experienced than myself. Moreover, I have developed an interest in the development of mathematics teachers at a time in Scotland where the structure of ITE is under consideration and the workload of teachers continues to be distinctly onerous.

1-4.3 Placement Scenario

Picture the scene:

During the Mathematics department meeting, discussion centres on the arrival of a student on Monday. As part of their timetable, you, a teacher within the department, will have the student teaching one of your classes after a few observations. What does this mean to you? What will you do with that student? How much time will this take up?

Within a department, one teacher undertakes the formal role of supervisor while the student will actually work with a number of teachers to ensure exposure to a range of classes and courses. I have seen a great variation in the actions teachers take with the students placed in their classes. The

manner in which placement is conducted has not changed fundamentally over the three decades I have been a teacher. My personal observations of student experiences within my department crystallised once I began to conduct placement visits for universities. Assessing numerous students across a number of settings, many of which I visited repeatedly, I became aware not just of the variable quality of placements and the variation in the experiences on offer but also of the complexity involved in passing judgement on student practice. However, like many others, I was unable to see a simple solution to address the concerns these observations raised.

I also observed many examples of what Her Majesty Inspectors of Education [HMIE] (2005) described as “good practice”, i.e. of supervisors providing well-judged, carefully tailored feedback to students. Without any indication of discussion to share learning from, or about, this work within a department, let alone across an authority, this good practice remained isolated.

These observations raise the question of what thoughts and beliefs are driving teachers’ interactions with a student? How do teachers conceive of their role as a guide to a student? Approaching this question from a different angle, it would seem important not to start with a prescriptive, preformed stance on how teachers *ought* to interact with a student; but rather to begin an enquiry by gaining a much clearer sense of how teachers themselves represent their actions. These questions and considerations drove the formation of this study. It was also driven by the recognition that a succession of policy documents, which are briefly summarised in the following section, identified the quality of student placements as a continuing and pressing concern.

1-5 Scotland: The Policy Context for Initial Teacher Education

1-5.1 Introduction

The Scottish Government regularly commissions reviews of the quality of aspects of education. One recent significant review of teacher education,

entitled *Teaching Scotland's Future* (Donaldson, 2011) commonly known as the *Donaldson Report*, established a number of strengths in relation to ITE. However, this report also identified placement as an area that would benefit from consideration, declaring that “what happens during placement remains contentious” (Donaldson, 2011, p.90). Furthermore, the *Donaldson Report* noted that, as a central element of ITE, students should be benefiting more fully from the experiences and expertise available during their time in schools. By highlighting these matters, the *Donaldson Report* was merely repeating concerns that had already been raised in a long series of reports, that will be discussed in the following paragraphs.

Within this section I introduce the key Scottish policy documents that shaped the context behind the research topic. As already noted, a fuller account of these reports and the research that they triggered will be provided in the Literature Review.

While the *Donaldson Report* brought back to the fore questions that had been quietly simmering in my head through my career, I then established that the concerns it raised had a long history. The following timeline of reports related to ITE in general, and placements in particular, demonstrates just how deeply these ‘thorns’ are embedded.

Criticism of school placements appeared in the *Report of the Committee: Teachers and Youth Leaders*, referred to as the *McNair Report* (Board of Education, 1944). Although the *McNair Report's* proposals were made in reference to England, the committee had drawn evidence from all round the UK. This report admitted that “school practice under present conditions has been criticised, perhaps with justice, as too brief, confused in objective and somewhat artificial” (Board of Education, 1944, p.77). It suggested establishing two types of school practice, the second of which evolved into the placement students currently experience. Providing this placement experience required education authorities to undertake an active role and accept new responsibilities (Board of Education, 1944, p.79).

While the authors of the *McNair Report* considered their proposal as radical, due to its pointing up of the necessity of sharing responsibilities between colleges of education and education authorities, this was in contrast to the *Training of Teachers* (Advisory Council on Education in Scotland, 1946, p.57), referred to as the *McClelland Report*. The *McClelland Report* observed that the Scottish education authorities already had a vested interest in, and responsibilities for, teacher education. Even though the system of training centres and colleges was controlled by the National Committee for the Training of Teachers, they were supported by funding from the education authorities. Indeed, the *McClelland Report* (1946, p.57) described the system in Scotland as:

firmly based on the principle that the training of teachers is an integral part of the state educational system, and a national concern: those who control the schools, the teaching profession, and others concerned in the provision of training, all have a say in shaping its policy.

Moving ahead to the 1970s, two key reports were published. First, the *Training of Graduates Secondary Education* (GTC, 1972), commonly referred to as the *Brunton Report*, courteously requested cooperation between education authorities, schools and colleges of education. Second, *Learning to Teach* (SED, 1978)¹, commonly referred to as the *Sneddon Report*, took a non-confrontational approach by confirming that good practice existed when responsibilities were properly organised between schools and colleges of education. To develop structured relationships and ensure clarity concerning responsibilities, the *Sneddon Report* (1978) issued detailed recommendations to the education authorities, schools and colleges of education, which were slowly implemented over the subsequent two decades with varying success (White, 1994).

¹ 1872 - 1991 Scottish Education Department [SED].
1991 - 1995 Scottish Office Education Department [SOED].
1995 - 1999 Scottish Office Education and Industry Department [SOEID].
1999 - 2007 Scottish Executive Education Department [SEED].

Cameron-Jones and O'Hara (1994a, p.135) attributed “the reasonable and courteous style” of these policy documents to the formation of the General Teaching Council for Scotland [GTCS] in the 1960s. (The GTCS is the oldest professional body for teachers in the world, with the accreditation of Scottish ITE programmes one of its many statutory functions.)

The *Guidelines for Teacher Training Courses* (SOED, 1993) set a somewhat contrasting tone to those 1970s reports. Although called ‘guidelines’, they set a mandatory requirement for schools and colleges of education to work in partnership which led Cameron-Jones (1995) to claim that this was evidence of a government determination to interfere. She also saw the forcing of joint working as contributing to a sense of “disequilibrium” (Cameron-Jones, 1995, p.29) among those parties involved in ITE.

These decades had witnessed significant changes in education which had included colleges of education going through radical transformation as they secured mergers with universities (Paterson, 2003). The new century began with the commissioning of a number of government reports with direct implications for ITE, beginning with the *First Stage Review of Initial Teacher Education* (2001).

As part of the *First Stage Review* (2001), the Scottish Executive consulted on a *Teaching School* model with the purpose of restricting placements to specific schools to ensure only the ‘best schools’ prepared teachers, similar to the *Professional Development Schools [PDS]* concept introduced in the United States. However, the teaching profession showed limited enthusiasm for this proposal, and consequently the expectation for all schools to be involved in ITE persevered. The subsequent publication of the *Donaldson Report* (2011, p.45) emphasised this commitment for all schools to be involved and planned “to enhance ownership of initial teacher education by staff in schools”; but this was not to be a duplication of the approach taken in England. There, the Department for Education [DfE] gave schools an increasing role in ITT at the expense of the universities, aiming for schools to have the ultimate control and responsibility. The *Donaldson Report* did not

recommend that schools *replaced* the universities but that all the actors worked closer together for the benefit of all, with schools operating in an equal partnership with the universities. The Scottish government's attempts to influence the overall structure of ITE and formalise the relationship between the actors involved, supported by the recommendations from this series of reports, spans decades. At the same time, these reports continued to note that not much has actually changed at the 'chalkface'.

The long-standing policy ambition is not just for partnerships to improve placement experiences but also for the teachers to consider teacher education as an integral part of their work.

Returning to the *McNair Report*, it was requested that teachers "welcomed the presence of a learner [student] and put themselves out to meet his needs" (Board of Education, 1944, p.79). Contrastingly, the *McClelland Report* (1946, p.21) made very limited explicit reference to teachers' involvement in student placements other than stating that teachers "should have a sense of responsibility in connection with the practical training of students".

Both the *Brunton Report* (GTC, 1972, p.40) and the *Sneddon Report* (SED, 1978) evidenced and praised "the readiness of the teachers of Scotland to share in the training process". Indeed this claim concerning the "readiness" of teachers continued to be made, with both Elder and Kwiatkowski (1993) and Cameron-Jones and O'Hara (1995a) repeating that teachers were in agreement that they should be contributing to developing students.

Although teachers' personal sense of professional responsibility contributed to their everyday involvement with students (Cameron-Jones, 1995), the numerous attempts to formalise this to be a professional obligation have yet to be achieved, as is evident by it featuring prominently in the *Donaldson Report* (2011).

1-5.2 The Focus of These Policy Documents

It can be observed that too many of these policy documents have been written for those in positions of authority, with a top-down approach taken to actions. It would also appear that not all the work undertaken by teachers in relation to ITE is fully appreciated. In the secondary school context, it is customary for a number of teachers, not just the designated supervisor, to support students on placement. While HMIE (2005, p.5) did observe that a number of teachers in a subject department work with a secondary student and that these teachers contribute to assessing students, it can be argued that their contribution to students' development is still insufficiently recognised.

To me, it appears that the focus of policy documents was upon the various bodies and managers that engage with HMIE guidelines, but this was not reaching or affecting sufficiently the core, i.e. the individual teachers. Plans in relation to placement should first appreciate the existing practice of all those involved. These are not just leaders from within universities, education authorities and schools, but also the teachers who have daily contact with students and, I would argue, have the greatest impact on their development. This study has set out to gain a clear sense of how these teachers in the frontline of placements conceive of the role.

1-6 Defining Key Terms

In the Scottish context, where this research took place, some of the key terminology can be slightly different to that seen generally within the literature.

Looking first at the multiple synonyms used to refer to the block of time students spend in schools, a commonly used term in the general literature is *practicum*. In Scotland, this block of time was historically referred to as *teaching practice* (Board of Education, 1944). Nonetheless, both the university that featured in this study and its local schools use the term

placement. Cameron-Jones (1985, p.93) presented the Scottish change in terminology as a response to the *Sneddon Report* (1978):

‘placement’ includes profession-wide, community and whole school experience as well as, crucially, the carefully structured and systematic learning of teaching in the classroom. It denotes therefore important changes in the scope and demand of the off-campus curriculum as compared with the ‘Teaching Practice’ of the past.

Although the terms *practicum*, *teaching practice*, and *placement* can be used interchangeably, following the terminology employed in the location of this study I use the term *placement* from this point forward.

The *students* referred to in this study were enrolled on the PGDE secondary mathematics programme in the university where this study was based. These students were aiming to complete the one-year university qualification accredited by the GTCS, followed by a one-year probationary period in school.

During this particular PGDE programme, students spend half of their time in the university and half their time across three distinct block placements, covering a range of schools, (State, Roman Catholic and Non-denominational, plus Independent), mostly located in six partnership education authorities. Two of these placements last six weeks each, with a final placement of five weeks. A student’s responsibility for teaching is expected to increase within, and across, each placement.

The study drew participants from secondary school mathematics departments. These teachers had experience of interacting with a student undertaking an ITE programme. I use the term *teacher* to refer to mathematics teachers with full registration with the GTCS who teach in a Scottish secondary school.

The term used by the university featured in this study, and the majority of local schools, to refer to the teacher assigned to oversee the student on placement is *supervisor*. However, across the international literature this term

has alternative meanings and there are also apparent multiple synonyms for the term supervisor, e.g. mentor, supporting teacher. When reviewing the international research literature, these ‘synonyms’ created problems as they were not just a straightforward substitution. The consequent potential for misunderstandings has been explicitly discussed by Hennissen, *et al.* (2008) and Hoffman, *et al.* (2015).

While conducting an analysis of literature with the purpose of charting the key aspects of supervisors’ behaviours, Hennissen, *et al.* (2008, p.169) made explicit reference to “a plethora of terms”. Hoffman, *et al.* (2015, p.101), in their extensive examination of research literature into supervisor and student interactions, explicitly stated that they “struggled with terminology at all stages” of their analysis. In both cases, the authors considered that the subtleties that lay behind the variations in terminology were worthy of exploration.

For the context of this study, a *supervisor* was the single teacher allocated with the responsibility to oversee a student in the department and assist the university tutor with writing the student’s Joint Placement Report at the end of the placement. A student does not necessarily participate in a supervisor’s class.

1-7 Placement Information and Partnership

The following information, collated from the handbooks that the university involved in this study issued to placement schools, makes clear the aims of placements alongside the roles and responsibilities of those whom the university considers to be involved.

The overall aims of a placement, focused upon student involvement within the classroom, are to provide students with:

- *Opportunities to observe and reflect on the teaching of experienced teachers.*

- *An introduction to the planning and teaching of both single lessons and series of lessons in the classroom.*
- *Experience of planning for and teaching pupils at different stages in order to develop their classroom skills and confidence and to deepen their understanding of the role of the reflective practitioner.*
- *Sufficient and increasing independence in classroom teaching skills and reflective ability.*

The following roles and responsibilities, also stated in this handbook, include:

Student: *expected to be an active participant in their own development.*

Supervisor: *to meet regularly with the student to discuss progress, give advice and support for improvement and development of student practice. The supervisor is responsible for collating evidence about the student's progress from other teachers and using this in discussion with the University tutor to write the Joint Placement Report. (The University requests that the supervisor has been teaching for more than five years).*

Regent: *to introduce students to the wider professional remit and responsibilities of teachers within the school community through a 'Regents' Programme'. In addition, to provide students with the opportunity to reflect on and discuss their progress with themselves and with other students on placement within the school.*

The university involved in this study has established a close partnership with a core of six local education authorities and a wider partnership that includes the Scottish Council of Independent Schools and the Education Institute of Scotland. Termed the *Teacher Education Partnership*, it manages authority and communication arrangements and identifies priorities for partnership development work in: ITE; Career-Long Professional Learning [CLPL]; and Masters level courses related to teacher education. The key principles of the partnership are included in Appendix A.

1-8 Structure of the Thesis

The structure of this thesis has followed the conventional format and comprises 7 chapters. This section provides a synoptic description of each chapter.

Chapter 1: *Introduction*

This chapter provides an outline of the tradition of initial teacher education in Scotland before introducing the gap in knowledge. Attention then turns to the aims of the study, covering the research question and the chosen research methodology, before progressing to specify the population from which participants were drawn. This leads into an introduction of me, as the researcher, to explain my professional interest in the topic.

The chapter moves on to discuss the situation in Scotland for ITE, specifically the policy context and the concerns around placement that triggered the study, before progressing to state the intentions behind the study

Finally, the chapter concludes with defining the key terms used in this thesis and provided a summary of the advice given to placement schools by the university in the form of a handbook.

Chapter 2: *Literature Review*

This chapter provides an analytical review of:

- The wider and local policy context for ITE and student placements;
- empirical studies within the international literature on ITE and student placement that form the background to this study;
- theoretical framework, principally Wenger's (1998) *Communities of Practice*, that are drawn on to interpret the findings.

The chapter begins by briefly setting out key international developments in teacher education in the last few decades, allowing a contrast then to be drawn with the context for ITE in Scotland. Policy documents covering the last 40 years and, in particular, the research that they triggered are examined to bring out enduring concerns over student placement and the forces in play

within ITE in Scotland. Attention then turns to literature on how teacher cultures and features of school contexts may impact on the supervision of students. In the following section, the focus narrows to consider studies on the interactions between supervisors and students, considering different dimensions of support and feedback that supervisors may provide and their role as assessors. This leads on to a review of professional development interventions that have aimed to enhance supervisors' understanding of their role and their support of students.

Moving on from such studies on supervision, the review then addresses the challenging question of how best to define and understand the knowledge that underpins teaching. This engagement with different dimensions of knowledge lays a foundation for the subsequent discussion of the interrelated nature of teaching, learning, and cognition, which in turn sets the scene for an extended consideration of reflective practice and Brookfield's (1995, 2017) account of critical reflection.

The review concludes with an analytical summary of Wenger's (1998) Communities of Practice framework which is central to the interpretation of this study's findings.

Chapter 3: *Methodology*

This chapter provides a detailed discussion of the methodology and methods of the study, beginning with a presentation of the interpretivist perspective which guided my research efforts, followed by a rationale for the deployment of the methodology of Constructivist Grounded Theory [CGT] to address the research question.

Attention then centres on the understanding of 'credibility' that underpinned the study, with credibility being viewed as involving multiple dimensions, rather than being a unitary matter. This is followed by an account of the different sets of actions that I took to achieve a 'credible' study. This account includes a consideration of different facets of reflexivity that I was alert to during the whole course of my research. In addition, I reflect on: the question of the degree to which I was an insider or an outsider in this research

context; and on my positioning as a researcher and how that may potentially have influenced both the collection and analysis of data.

The chapter moves on to present: the reasoning behind my sampling strategy, the process of sampling and recruitment; and a detailed profile of the participant teachers.

The general strategy and processes of data collection are then explained, with due attention being given to how they were informed by ethical considerations. This is followed by a description of the pilot study and the valuable role that it played in developing both the process and the content of the interviews in the main study. The approach to, and processes of interviewing in the main study are subsequently set out, followed by a description of the approach taken to transcription.

The remaining sections of the chapter provide a detailed, reflective account of the different, cumulative stages of the analysis of the study's data. This account includes concrete illustrations of how the coding processes that feature in CGT were taken ahead. These sections describe how coding initially began with line-by-line analysis of transcripts, before progressing to include focused coding, with the codes constantly being reviewed and analysed, resulting in some codes merging ready for the final stage of theoretical coding. The chapter then concludes with an explanation for the move away in the final stage of analysis from constructivist grounded theory towards deploying Wenger's (1998) Communities of Practice framework which allowed a coherent, synoptic picture of the findings to emerge.

The subsequent three chapters (4, 5, and 6) present and discuss the findings.

Chapter 4: *Teachers' shaping of students' trajectories into their communities.*

This chapter of the thesis focuses upon the first theme, of teachers' shaping of their students' trajectories into their community. The chapter commences by considering the question of the factors that influenced teachers' judgement of the 'legitimacy' of students as participants, before progressing to present the two overarching trajectories, circling or inbound,

that captured students' learning over the placement. The chapter continues by depicting the nature of the professional relationship that the participants wished to establish with a student and bringing out the complexities within this relationship. The chapter concludes with an examination of the bases on which participants assessed students' competence.

Chapter 5: *Experiences within trajectories*

This chapter focuses upon the second theme of teachers' priorities for learning the practice of their communities. It begins by setting out the opportunities for students to attempt practice and describes the forms of support and challenges provided for students. This leads to a consideration of the importance of exposing students to a degree of diversity in practice. Attention then turns to the post-lesson observation discussions, where teachers provided guidance. In the following section, the role of reflection is discussed. The chapter concludes by pointing up a certain degree of reciprocity in the relationship, where teachers learnt from, and because of, the student teaching their class.

Chapter 6: *What is missing?*

This chapter focuses upon the aspects participant teachers were either silent about or offered only glancing reference towards. These include the role of the primary assessor, their use of university learning, lesson planning, and learning from observation of the teachers themselves.

Chapter 7: *Discussion*

This chapter first summarises the central findings of this study to display how the research question has been addressed and to establish comparisons and contrasts with preceding research in this field.

Attention then turns to giving a more an analytical, interpretive discussion of these findings, drawing on Wenger's (1998) concepts of "trajectories" and "boundaries". This is followed by a critically reflective examination of a number of paradigmatic and prescriptive assumptions that were detected

within the teachers' accounts. It concludes with a consideration of the study's limitations, pointers towards future research directions, and insights for policy and practice.

Chapter 2 Literature Review

2-1 Introduction

This chapter takes ahead three objectives that are central to this study:

- setting out for the reader the policy context and other contextual influences on placements in Scotland;
- examining preceding studies on the role of supervisors and on students' experiences of placement that are pertinent to the concerns of this thesis;
- introducing the concepts, and in particular the conceptual framework of *Communities of Practice* (Wenger, 1998), that were deployed to interpret the findings of the study.

The following Methodology chapter describes how literature was deployed to provide sensitising concepts, first to shape the research question and the interviews, and then to assist in the analysis of findings. While the Methodology chapter draws out the interrelations between preceding work and my own efforts, this chapter focuses directly on the literature itself.

Attention first centres on an exposition and analysis of policy in Scotland concerning Initial Teacher Education [ITE] in general and placement in particular. This section draws out features of the history of policy in Scotland concerning ITE that the reader needs to understand; and establishes how current Scottish policy concerning teacher education differs markedly from that in a number of other Anglophone countries.

The focus then shifts to the topics of *Context and Culture*, considering how teacher culture, the ways of thinking and practising in individual school subjects, and school contexts all impact on supervisory practices. This is followed by an examination of preceding work on *Supervisory Interactions* that outlines the different forms of support that an established teacher may provide to a student. *Supervisor Professional Development* is then reviewed,

and a summary account is given of the nature and outcomes of a number of research and development projects in this area.

While placements have the key function of developing students' knowledge, there can be a lack of clarity over exactly what this 'knowledge' entails. Accordingly, a section of this review analyses closely the question of what knowledge of teaching involves, examining how different authors have delineated the components that form a teacher's professional knowledge. This scrutiny of questions concerning *Knowledge* leads into an examination of writing on the theme of reflection. On this theme, a section headed *Teaching, Learning and Reflection* looks at how the model of teaching and learning that a teacher holds may impact on the nature and degree of their reflection on practice. This section also identifies central facets of reflection and draws attention to work that has pointed up the value of treating reflection as a collaborative enterprise. The section concludes by considering what is at stake in becoming a *critically* reflective teacher (Brookfield, 1995, 2017).

The chapter ends with an analytical survey of Wenger's *Community of Practice* framework. As following chapters will reveal, it provided an overarching, integrative scheme that did encompass the findings of the thesis.

I have had to be selective with the literature to include since it was not possible to include it all. The criteria for selection was to focus upon research in the ITE phase as much as possible, and on staff employed in school rather than university. I have included some research set in the primary school context, but only where it seemed directly relevant and no secondary school context research was found on the topic.

2-2 General Policy Context

International reviews of policy formation have highlighted the significant attention governments have given to teacher education since the 1970s.

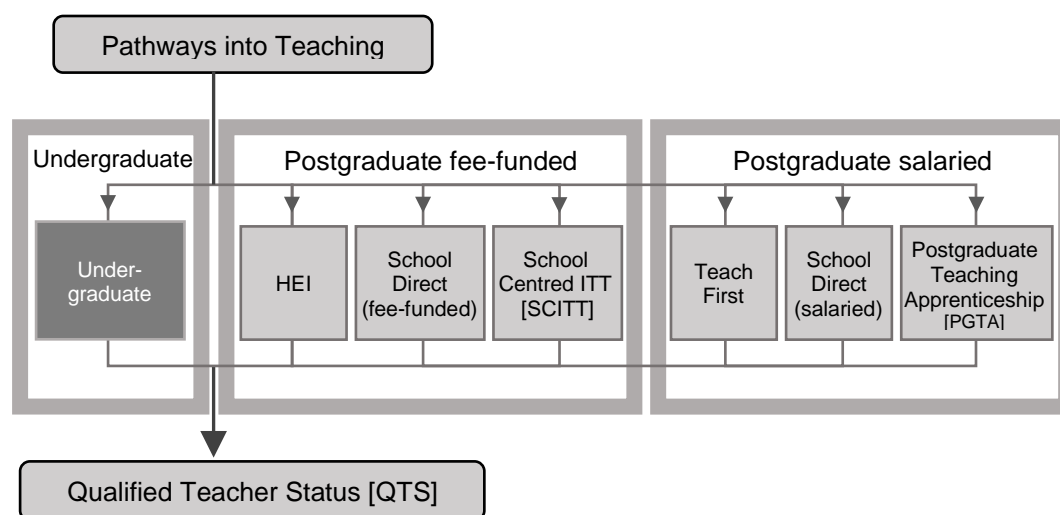
According to Furlong (2013), globalisation, competition, and international comparative assessments, e.g. PISA, were the key drivers behind such an emphasis; education moved to being both a social *and* an economic policy arena (Maguire, 2014). This movement was most marked in the U.S. and England. Accordingly, this section centres on developments in these two countries – developments which also throw into sharp relief the contrasting trajectory taken in Scotland.

Darling-Hammond (2006, 2009) has pointed up the duality of the agenda in the U.S. where, on the one hand, significant progress had been made in improving ITE programmes, and on the other hand, some states have removed the requirement to complete such a programme before entering the classroom. One underlying theme Darling-Hammond (2009, p.40) discussed was the concern about placement quality, describing placements as “fairly haphazard, depending on the idiosyncrasies of loosely selected placements with little guidance about what happens in them and little connection to university work.” These difficulties were attributed to the unbalanced funding across the schooling system, which resulted in a lack of diversity in pupil populations and a clustering of inexperienced and unqualified teachers in less advantaged schools (Darling-Hammond, 2009). The solution, adopted by many ITE programmes, was to develop *Professional Development Schools* [PDS]. PDS are formed from collaborations between schools and universities (Bullough, *et al.*, 1997), entailing the necessity for schools and universities to work together on ITE provision.

In England, a significant reorganisation of teacher education gathered momentum through the 1980s. The government set out to centralise the control of Initial Teacher Training [ITT] while introducing competition and incentives that aimed to improve teacher quality in the most efficient and economical manner (Mardle, 1995; Furlong, 2013). An initial policy statement in 1992 by the Department for Education [DfE] indicated the government’s intentions (DfE, 1992) which was reiterated when the DfE (2016, p.24) stated a determination to “continue to move to an increasingly school-led ITT

system”. The introduction of numerous pathways to gain Qualified Teacher Status [QTS], (displayed in Figure 2-1), simultaneously opened up ITT to competition (Maguire, 2014; Murray, Czerniawski and Kidd, 2017). Alongside the market forces these diverse routes created, appeared an increasing regime of regulatory structures and targets imposed upon the ITT work of universities by the government and its agencies, such as Ofsted, giving an indication of the government tightening control (Murray and Mutton, 2016).

Figure 2-1 Pathways for Initial Teacher Training in England (correct as of June 2019)



Adapted from DfE (2018, p.3)

These pathways not only contributed to the reduction in the dominance of universities (Jackson and Burch, 2015; Murray and Mutton, 2016), but also raised concerns that they created a model of a teacher focused on ‘local’ requirements with the result of hampering the movement of teachers nationally (Furlong, 2013; Maguire, 2014; Murray, Czerniawski and Kidd, 2017, p.20). According to current data, these school-led routes have now increased their proportion of trainees to be greater than the university-led routes (DfE, 2018).

The U.S., with similar concerns over the adequacy of teacher education, had also introduced numerous pathways during the 1990s although Darling-Hammond (2006, 2009) accused these pathways of actually contributing to

the lowering of teacher quality overall. Concern about this lowering of quality resulted in a national strategy for a more school-centred design and tighter control of the providers (NCATE, 2010). This tighter control was to be achieved through monitoring and performative assessment by: the providers; the Council for the Accreditation of Educator Preparation [CAEP]; plus local, state, and federal governments (Worrell, *et al.*, 2014).

In Scotland, over the same period the government did not exercise the same degree of control over, or reorganisation of, ITE provision. Menter, Brisard and Smith (2006) gave examples of the degrees of distance between government and ITE providers, such as: the university designed courses which are accredited by the teaching profession's independent regulatory body, the General Teaching Council for Scotland [GTCS]; and funding of ITE through the Higher Education Funding Council [HEFC] rather than directly from the government. Furthermore, Furlong (2013) highlighted the greater influence and power of trade unions and education authorities in Scotland. The power of the GTCS, the unions, and the universities, (through the Scottish Council of Deans of Education [SCDE]), was witnessed most recently by their separate but firm rejection, against the wishes of the Scottish Government, of the attempts by Teach First² to expand into Scotland. While suggestions that performative assessment may be applied in Scotland can be found within the quality assurance section of the report *ITE Content Analysis* (2017, p.11), there are yet to be any statements to that effect. Interestingly, the government has funded a longitudinal study (2017-2023) that will explore the distinct difficulties involved in assessing quality. Entitled *Measuring Quality in Initial Teacher Education*³, this is a collaboration between all the university providers in Scotland, through the SCDE, and supported by the GTCS. The contrast here with the situation in England is very evident.

² <https://www.teachfirst.org.uk/>

³ <http://www.scde.ac.uk/projects/measuring-quality-in-initial-teacher-education-mquite/>

While a wider international focus that included systems more aligned with Scotland, (i.e. Australia and New Zealand), would possibly provide a fuller picture, it is the contrast that the U.S. and England systems provide that allows a nuanced, succinct picture to be painted. Both the U.S. and England have made progress in implementing their policy statements, specifically in relocating the majority of ITE provision into schools and in exercising tighter control. Scotland, however, has only set up a number of university-led pilot schemes to increase the number of pathways into teaching. The next section moves from this general consideration of the policy context of teacher education to look in detail at the history of, and current practice in, student placements in Scotland.

2-3 Scotland: The Policy Context for Placements

Chapter 1 has set out the long history and enduring nature of the issues surrounding student placements. Here I focus upon how researchers have examined, and responded to, the series of policy recommendations.

An appropriate place to start this review is with the recommendations of the *Sneddon Report* (1978). The overarching recommendation from the *Sneddon Report* (1978, p.23) was: “for a more structured relationship between schools and colleges as well as a clearer definition of the individual and joint responsibilities in the training and induction of teachers.” The report proceeded to endorse research that carefully scrutinised new course designs, enabling “a coordinated evaluation of a variety of approaches” (SED, 1978, p.27). This stimulated the various colleges of education to conduct their own in-house research supported by funding from the Scottish Education Department [SED⁴]. The initial focus of research was upon improving primary school placements.

⁴1872 - 1991 Scottish Education Department [SED].

The Primary Teaching Project [1979-1982], led by Cameron-Jones (1982a) at Moray House⁵, involved a new cohort of students each term while maintaining the involvement of the same staff. On completion, Cameron-Jones (1982a) recommended further research into the conceptualisation of supervision and the creation of professional development for supervisors. The project at Dundee College⁶ led by Elder and Chalmers (1987) began a little later, in 1982, and followed one entire student cohort. Their recommendations included providing specific documentation to enable clearer communication with schools, not just about the student but also the expectations for placements, how to support a student, and the supervisor's role in assessment.

Considering both primary and secondary contexts, Elder and Kwiatkowski (1993) at Northern College³ investigated the existing partnership model between universities and education authorities. The authors identified a range of issues that they considered centred on the lack of mutual understanding of roles and responsibilities alongside the lack of payments to schools for staff time. Most importantly, they concluded that "the whole programme must sit within a balanced framework of quality assurance" (Elder and Kwiatkowski, 1993, p.64).

Meanwhile, the SOED⁷ directed Moray House to create a pilot course to run in parallel with the existing postgraduate secondary course. The pilot was to assess the feasibility of an increased role for schools and included Elder and Kwiatkowski's (1993) recommendation of payments to enable supervisors to be allocated time for the work and to undertake professional development for

⁵ Moray House College of Education became Moray House Institute of Education before merging with the University of Edinburgh to eventually become Moray House School of Education, presently Moray House School of Education and Sport.

⁶ Dundee College of Education merged with Aberdeen College of Education to form Northern College. This merger was later reversed as Dundee College merged with Dundee University and Aberdeen College merged with Aberdeen University.

⁷ In 1991 the Scottish Office Education Department [SOED] replaced the SED.

the role (Cameron-Jones and O'Hara, 1993, 1994b, 1995a, 1995b). Over a year, 114 supervisors undertook three half-days of professional development. The Scottish Council for Research in Education [SCRE] monitored the pilot externally, noting that the payments to schools had been essential (Powney, *et al.*, 1993). Without these payments, headteachers were unable to afford to release supervisors from their teaching commitments, the issue which was identified by Elder and Kwiatkowski (1993) and addressed in England by requiring the university to pay the school (DfE, 1992). Indeed, teachers' existing workload and increasing demands on them from within the school were felt by Cameron-Jones and O'Hara (1995a) to be the major reason for their rationing time with students. Cameron-Jones and O'Hara (1993, 1995b) reasoned that proper recognition of a supervisor's contribution should be included as a part of formalising partnership arrangements. After all, the formal partnerships between ITT providers and schools in England claimed to have achieved just that (Glover and Mardle, 1996).

Cameron-Jones and O'Hara (1994b) argued that the pilot's new structure for supervision was a success, although admittedly there was a lack of statistically significant differences in outcome between their pilot and non-pilot groups. Their argument must have been persuasive, as it contributed to the government's decision to extend this form of supervision nationally (Cameron-Jones and O'Hara, 1995b). However, this decision was quickly reversed after strong opposition by the teaching profession (Smith, Brisard and Menter, 2006; Gray and Weir, 2014). The legacy of the 1990s became an increased school involvement in ITE, but without any additional funding to schools and reliance on the goodwill of teachers to act as supervisors.

Christie, *et al.* (2004, p.121) described the continued reliance on teachers' goodwill as a "fatal flaw", a flaw which Mtika, Robson and Fitzpatrick (2014) held responsible for the continued lack of training and lack of clarity concerning supervisors' roles and responsibilities. Christie, *et al.* (2004) and Mtika, Robson and Fitzpatrick (2014) did not, however, consider how such a move to a formal definition of roles and responsibilities might constrain

teachers' agency and initiatives to adapt their actions to their own contexts and individual students. Guided by the findings of the present study, this is a question that will be taken up in the Discussion chapter.

For the teaching profession, the publication of *A Teaching Profession for the 21st Century* (SEED, 2001)⁸, commonly referred to as the *McCrone Agreement*, provided opportunities for teachers to enhance their professional status but, as claimed by Gray and Weir (2014), also distracted them from noticing that the expectations on the supervisor's role had steadily increased in magnitude. As highlighted in chapter 1, simultaneously the Scottish Executive⁹ commissioned a review of ITE provision, which was conducted in two stages.

The *First Stage Review of Initial Teacher Education* (2001) was to focus on areas identified as having persistent issues, one of which, echoing the *Sneddon Report* (1978), was the quality of placements. This review was to provide what were termed as 'practical recommendations'. In stating that the prevailing situation of placements based on informal arrangements between universities and education authorities was no longer appropriate, the review recommended that formal arrangements were immediately established. These arrangements were to emphasise the shared responsibility for placement quality and assessment of students.

To assist in shaping the remit of the second stage, HM Inspectorate for Education [HMIE] conducted a *Scoping Review of Initial Teacher Education* (2003). This scoping review found a strong consensus from all parties for dealing with the previously identified weaknesses: within the placement arrangements; in the quality of placement experience; and in the assessment of student practice. The *Review of Initial Teacher Education Stage 2* (2005) also revealed evidence of inconsistent assessment and placement quality,

⁸ In 1999 the Scottish Executive Education Department [SEED] replaced the SOED.

⁹ The Scotland Act 2012 legally renamed the Scottish Executive as the Scottish Government.

and called on education authorities to be more active in their responsibilities towards placement provision.

Before this Stage 2 report was published but in response to its findings, HMIE was commissioned to review placements in detail. In a report entitled *Student Teacher Placements within Initial Teacher Education* (2005), the inspectorate reiterated the concern around the highly variable quality of school placements alongside the lack of clarification of roles and responsibilities and difficulties in developing mutual understanding for assessing students. HMIE (2005) believed the partnership arrangements should enable more consistent placement quality and closer working between universities and schools to offer clarity. The difficulties faced by partnerships in addressing student assessment were exacerbated by the different grading systems the universities used (HMIE, 2005). The solution, proposed by the Scottish Teacher Education Committee [STEC], was “to promote greater harmonisation in assessment and reporting” (HMIE, 2006, p.3) which has resulted in an agreed standard placement report that all the universities now use. In their 2005 report, HMIE (2005) issued specific guidelines to the GTCS, universities, education authorities, schools, and the SEED. Their subsequent report in 2006 found evidence of improvements, but noted that there was scope for more to be done (HMIE, 2006).

The themes of concern for placement quality and student assessment continued to appear. They featured, for example, in the *Report on the Aspect Review of Initial Teacher Education* (HMIE, 2010b) that was focused upon the introduction of Curriculum for Excellence; and in the *HMIE Analysis for the Review of Teacher Education in Scotland* (HMIE, 2010a) conducted to provide evidence to inform the *Donaldson Report* (2011).

The *Donaldson Report* (2011) not only focused attention on the seriousness of the issues around placement quality and student assessment, but also asserted that accountability does not lie wholly with the universities. This point was important due to the findings of a consultation for the *First Stage Review* (2001, p.30) revealing that universities “regard themselves as having

the primary responsibility for the quality of experience on school placement” and that HMIE (2005) had considered the responsibility for quality lay with schools. It is hardly surprising then that the *Donaldson Report* (2011) proposed that the GTCS and the HMIE added monitoring placement quality to their respective remits and that students’ placement experience should be included as part of each school’s self-assessment using the *How Good Is Our School? [HIGOS] framework* (Education Scotland, 2015b). However, inconsistencies in placement quality and student assessment continue to be highlighted, most recently in the Education Scotland¹⁰(2015a) *Aspect Review of the Education Authority and University ITE Partnership Arrangements* and by Black et al.’s (2016, p.31) *Evaluation of the Impact of the Implementation of Teaching Scotland's Future*.

The emphasis given to placement quality and student assessment in the formal partnership arrangements proposed by the *First Stage Review of Initial Teacher Education* (2001), suggests that the existing arrangements were seen to have flaws. One major area of weakness was that these arrangements focused upon staff in managerial positions rather than on those teachers directly involved with students within the classroom. This focus ran contrary to the advice of Elder and Kwiatkowski (1993).

Indeed, one of the areas for development identified from the most recent review of partnership arrangements was for more efficient communication with teachers concerning their involvement with students (Donaldson, 2011; Education Scotland, 2015a). On this theme, Mtika, Robson and Fitzpatrick (2014) presented a strong case for a greater emphasis on collaboration between supervisors and university tutors, which would require a very clear formal operational structure to encourage the schools and universities to invest in terms of staff time to participate. In contrast to the Cameron-Jones and O’Hara proposal, which had the universities dominating, the structure proposed by Mtika, Robson and Fitzpatrick (2014) focused upon

¹⁰ In 2011, HMIE merged with Learning and Teaching Scotland to form Education Scotland.

collaboration. It can be noted here that the need for a structure to enable stronger collaboration between university tutors and supervisors is not limited to Scotland (Hoffman, *et al.*, 2015).

2-3.1 Commentary on Scotland's Placement Policies

In short, the story in Scotland appears to be stuck in a Mobius loop. The *Brunton Report* (1972, p.40) specifically required teachers' involvement in ITE, insisting "that all secondary teachers will be required to assist in the training process". The *Sneddon Report* (1978, p.26) recommended that teachers be more active in ITE and that their professional organisations "should regularly draw to the attention of their members their responsibility for guiding and training students". The *1987 Salaries and Conditions of Service Agreement Scotland* (Circular SE/40) stated teachers had a part in developing students, while the GTCS (1997) presented teachers' professional responsibilities as including work with students. However, this responsibility is not given a prominent place within the profession's Standards for Registration, where it only features as an element within an area of "Professional Action" (section 3.4.2 of Professional Skills and Abilities (GTCS, 2012, p.19)).

In studies conducted in the 1990s, teachers indicated their desire to be involved with students. Both Elder and Kwiatkowski (1993) and Cameron-Jones and O'Hara (1995a, p.198) stated that their data presented "an indication of teachers' commitment to a positive role in initial teacher training". While teachers were seen as ready to contribute, they were described as expressing extreme opposition to unconditionally accepting working with students as part of their professional responsibility (Brisard, Menter and Smith, 2006). Perhaps the profession's response was due to their disapproval of government interference, or was a result of workload implications creating the concern amongst teachers that they did not have the time necessary for students (Cameron-Jones and O'Hara, 1995a; Brisard, Menter and Smith, 2006).

Nonetheless, the *McCrone Agreement* (2001) presented teachers' work with pupils as central and did not include students. The *First Stage Review of Initial Teacher Education* (2001) confirmed that teacher involvement with students continued to be based on the goodwill of teachers. Once again, the *Donaldson Report* (2011) demanded teachers be involved with students by calling for all teachers to see themselves as being responsible for teacher education. This call was supported by the *Report of the Review of Teacher Employment in Scotland* (Scottish Government, 2011), commonly referred to as the *McCormac Report*.

The picture painted by policies and research suggests that the situation is not straightforward. For example, teachers may have desired to be involved with students, but they resisted policy aspirations of making this a contractual obligation. Perhaps policymakers should contemplate the "strongly held conceptions of professionalism" described as underpinning the culture in Scotland to be the main influence on teacher involvement in ITE, not contractual obligations (Cameron-Jones, 1995, p.29). While research by Brisard, Menter and Smith (2006, p.60) also found teacher professionalism was the main driver behind their involvement, the authors described it as "with a touch of compliance."

Returning to the *McNair Report* (1944, p.77), it admitted that:

No specific provision is made for it in the schools as regards staffing, accommodation or equipment. The work of the schools in making school practice possible is an extra task thrown upon them. They generally undertake it willingly, though arrangements can often be made only with difficulty and the help of the school staff receives no special recognition...

Upon reading the above, it would be easy to assume that this extract was from a recently published report, not from one that is nearly 75 years old.

2-4 Context and Culture

Having made the initial assumption that the effects of school contexts remain generally underappreciated in research literature on teacher development, Hargreaves (1984) researched extensively teaching, teacher cultures, and teacher emotions. Hargreaves' (1984, 1992, 2000) work presents a strong argument that teachers' practice is affected by many factors within their teaching community. The most notable of these factors, stage of schooling and subject, encouraged me to consider carefully where I located this study.

From my own experiences as a teacher I would agree with Hargreaves' (1992, p.217) premise, that teachers in secondary schools would face different "routine problems" than teachers in primary schools and that these problems may also be related to the nature of their specific subject (Hargreaves and Tucker, 1991; Hargreaves, 1992). However, rather than identifying these 'routine problems', Hargreaves (1992) identified three broad categories of 'teacher culture', (defined by him as the form of relationships between teachers within a school), that appeared connected to the stage of schooling. These categories were: individualism; collaboration; and balkanization. The typical location for individualism and collaborative cultures were primary schools while the culture of balkanization was typically located in secondary schools. Balkanization, as described by Hargreaves (1992), is the formation of competitive groups of teachers, usually along the lines of the perceived status and priority given to curriculum subjects.

Hargreaves (1992) determined that, as teachers learn most from their school colleagues, the teacher culture within a school would impact upon teacher development which in turn impacts upon their practice. From their research into teachers' workplace learning, Hodkinson and Hodkinson (2004a) also identified that a subject department's culture within a school, whether more collaborative or individualistic, was a significant influence on teacher development and therefore teaching practice.

Having highlighted the importance when conducting research of being alert to the differences between primary and secondary teacher cultures and subject specific contexts within secondary schools, I shall now introduce two research projects conducted with an overarching theme of “mentoring and institutional structures” (McIntyre and Hagger, 1996, p.2). These projects acknowledged the distinct issues of supervision in different stages of schooling and in different subjects and questioned how these differences impacted upon students’ placement experiences.

First, the project by Keele University involved one ITT provider, 20 school case studies, and over 100 supervisor teacher questionnaires (Glover and Mardle, 1995, 1996). Glover and Mardle (1995, 1996) illustrated not just the considerable complexity involved in supervision, but also that teacher culture had a strong influence on supervisory practices and student experiences. Williams and Prestige’s (2002) smaller but more recent study researching the induction of beginning teachers across 11 schools (primary and secondary) also reached the same conclusions. Additionally, researching across China, the U.K., and the US, Wang (2001, p.70) found that even an inspiring teacher undertaking the supervisory role would be more likely to act as a local guide bringing a student’s practice to align with their school’s culture, rather than fostering a similar level of inspired practice in the student.

Second, the project by Sussex University investigated the impact subject philosophies had on the supervisor relationship in secondary schools (Dart and Drake, 1996). Dart and Drake (1996) established that supervisors recognised that it was important that students gained an understanding of the school culture, of their subject’s culture, and the subject’s status within the school. It is appropriate to note here that the status and culture of a subject are likely to be less prominent concerns in primary schools, pointing up the need to bear in mind the stage differences when researching student placement experiences.

Also linked with school stage and teacher culture, was the emotional dimension of teacher practice (Hargreaves, 1998, 2000). Hargreaves and

Tucker (1991, pp.496-7) claimed that primary teachers have an “especially strong” commitment to care, to “interpersonal affiliation and affection”. Drawing upon interviews with both primary and secondary teachers, Hargreaves (2000, p.821) considered the reasons behind this distinction were that secondary teachers strived to maintain a certain distance from their pupils, assisted by the nature of their timetables dictating a “highly fragmented contact”. At the same time, he did not represent secondary school teachers as lacking in commitment to their “social and moral responsibilities” (Hargreaves and Tucker, 1991, p.497).

In summary, Hargreaves’ research proposes that the secondary and primary school contexts are distinct. Typically, the secondary context would have a balkanization culture with less close personal relationships between teachers and pupils and the primary context would have an individualist or collaborative culture with close, warm personal relationships. These differences filter through to teaching practice, which could cross over into supervisory practices with students on placement.

2-5 Supervisory Interactions

A common assumption would be that the ‘best teachers’ would make the most appropriate supervisors of students. However, many authors (e.g. Evertson and Smithey (2000), Wang (2001), Schmidt (2008), and Timperley (2010)) have stated that being an accomplished teacher does not guarantee that you would be a good supervisor.

From their research with students, (primary and secondary), at the end of their ITE course in Scotland, Rippon and Martin (2003, 2006) constructed a job description for the mentors of probationer students. The job description covered the activities of: “meeting with probationer teacher/s individually to provide advice or feedback, carrying out classroom observation, organising

CPD¹¹, report writing and participating in tri-partite meetings with probationers and others” (Rippon and Martin, 2006, p.85).

They also created a ‘personal specification’ to guide the selection process for mentors of probationer teachers. This personal specification derived from students’ experiences of supervision during their training period and highlighted the features students desired in their ‘next supervisor’. Accordingly, although Rippon and Martin’s ‘personal specification’ was designed to assist the selection of mentors for probationer teachers, it can also be viewed as very much applying to the supervisors of student teachers.

Figure 2-2 Personal Specification

Induction Supporter Trait Categories	Desirable Features of Each Category
Approachability	Inclination to work with probationers
	Time for a probationer
	Empathy for hopes and fears
	Open to working in partnership
Teaching Credibility	A competent teaching role model
	Respected by others in school
Professional Knowledge and Authority	Up-to-date educational knowledge
	Knowledge of whole school issues and procedures
Motivational skills	Knows what to look for in classroom observations
	Can give sound advice and direction and feedback
	Shares their enthusiasm for teaching
Other	Fair, honest, sense of humour, respectful of other people’s feelings, holds a personal as well as professional identity.

(Rippon and Martin, 2006, p.93)

As part of a larger study on identity formation within the secondary school stage, Izadinia (2015a, 2015b) researched student and supervisor

¹¹ Continuous Professional Development

expectations of supervisory interactions. Both groups were established to have clear expectations, with the greatest importance placed upon the feedback dimension by supervisors. Accordingly, I will use the feedback dimension to explore the literature around the approaches to support supervisors may provide, beginning with technical support.

2-5.1 Technical Support

Technical support is a standard approach to supervision, where policies and procedures are explained to help students become established in the school (Feiman-Nemser and Parker, 1993). Franke and Dahlgren (1996) assume that supervisors will be able to provide this type of support. Rippon and Martin (2003, 2006), by contrast do not make this assumption.

Having analysed supervisory interactions and related them to interview data from those supervisors and their students, Franke and Dahlgren (1996) described technical support as involving training students in skills and procedures specific to the context and immediate situation, with limited identified transferability and without drawing upon students' existing knowledge or requiring their critical cognitive engagement. The training would involve direct instruction, conveying information to become embedded within the students' cognitive structures by multiple instances of such instruction without the need for conscious effort; learning would be implicit.

The directive nature of technical support interactions resulted in an authoritarian (Ben-Peretz and Rumney, 1991) or hierarchal relationship (Ambrosetti, Knight and Dekkers, 2014). The relationship had the objective of transmitting knowledge into the novice reflecting a form of the traditional apprenticeship, where compliance was expected and support was minimal (Elder and Kwiatkowski, 1993).

According to Roth (1989, p.31), traditional apprenticeships restricted learning potential which was unhelpful in unpredictable and unstable environments such as classrooms. Eraut (2004, p.27) agreed, expressing concern that

“teaching is too complex and unpredictable an activity for the *replication* of a blueprint for the *application* of a simple set of principles to provide a sufficient foundation for good practice”. Eraut (1995), concerned over the longer-term effect of neglecting a conscious effort to understand, viewed directive and hierarchical interactions as problematic. However, he conceded that in the short term, students do need this form of support with regard to unfamiliar school routines and issues such as behaviour management.

In a series of publications, Hargreaves (1984, 1992, 2000) stressed that it is necessary for students to develop an understanding of the school as an organisation with specific procedures and to establish good relationships with colleagues. He also emphasised the importance of technical support to achieve this goal. While agreeing that students need to ‘fit in’ to the school, Hoffman, *et al.* (2015) warned against producing compliant individuals, highlighting the importance of supervisors knowing ‘how to grow students’.

One criticism made of supervisors offering only technical support was that they often withdrew their support once their student appeared confident (Feiman-Nemser and Parker, 1993). However, Maynard and Furlong (1995) present distinct stages of student development that suggested technical support can be withdrawn if it is replaced with other forms of support, highlighting that the support needs to be adapted as the student develops. The following findings chapters will reveal that the teachers in the current study described how they did indeed adapt support to a student’s stage of development.

From examining research into supervisory discussions, Hennissen, *et al.* (2008) identified the importance of supervisors adjusting their support role to match their students’ needs. Jones and Straker (2006, p.182) noted that the negative effects of technical support can be mitigated by employing emotional support.

2-5.2 Emotional Support

Centring on the emotional dimension of teaching discussed earlier, emotional support involves assisting a student with any immediate difficulties or worries (Feiman-Nemser and Parker, 1993). Izadinia (2015a, p.4; 2015b) has confirmed that the emotional support offered by “an open and friendly” supervisor is important to students.

The link between teachers’ emotional connection with pupils and school stage was a question raised by Jaspers, *et al.* (2014) after conducting small-scale research into supervision within the primary school stage in the Netherlands. They urged researchers to investigate the impact different degrees of emotional connection have on supervisory interactions.

The likelihood that a teacher’s emotional connection with their pupils correlates with school stage and in turn with students was supported by research by Clarke and Jarvis-Selinger (2005). Their two-part study investigating the teaching perspectives of supervisors in Canada confirmed that a significant number of supervisors had a dominant nurturing perspective. However, Clarke and Jarvis-Selinger (2005, p.72) noted these supervisors were “twice as likely” to be working in primary than in secondary schools.

Teachers’ emotional connection with students has been argued to have both positive and negative effects. The negative effects included the avoidance of critically reflective discussions (Clarke, Triggs and Nielsen, 2014), a tendency to provide insufficient challenges for student development (Edwards, 2014), and a tendency to be softer when assessing students (Jones and Straker, 2006). Furthermore, these effects hindered the development of student practice (Jones and Straker, 2006; Clarke, Triggs and Nielsen, 2014). I will return to these negative effects in section 2-5.4.

While acknowledging that the school context influenced supervisors’ views of their task, Wang (2001) considered that the provision of only technical and

emotional support was the result of limited, if any, professional development directed at supervisory practices. As the next section shows, to move beyond technical and emotional support requires a more intense form of interaction.

2-5.3 Educative Support

Educative support is the broad classification applied to supervisory interactions that support students in constructing knowledge of teaching through collaboration (Feiman-Nemser and Parker, 1993; Maynard and Furlong, 1995; Feiman-Nemser, 1998). Educative mentoring has two common purposes: first, to assist students in developing an appropriate body of professional knowledge, and second to support students to develop a deeper and more complex understanding of the assumptions they make (Feiman-Nemser, 1998).

Although Franke and Dahlgren's (1996) research found technical and emotional support dominated supervisory discussions, they also found some evidence of supervisors articulating their reasoning. This reasoning represents "teachers' judgment in apprehending the events of practice from their own perspectives...much as a "glue" that brings all of the knowledge bases to be on the act of teaching" (Grimmett and MacKinnon, 1992, p.387). Depicted as 'interpreting' by Maynard and Furlong (1995, p.22), supervisors required not only a perspective that views students as learning partners (Tillema and Orland-Barak, 2006) but also to be "capable not only of practicing and understanding his or her craft, but of communicating the reasons for professional decisions and actions to others" (Shulman, 1986, p.13). Maynard and Furlong (1995, p.22) hint that this naturally produces the more interactive discussion that requires students' cognitive engagement.

In addition, when a supervisor and student form a "learning-partnership", opportunities for supervisor learning can occur (Fischer and van Andel, 2002, p.3; Tillema and Orland-Barak, 2006). On this theme, Feiman-Nemser and Parker (1993) had witnessed some supervisors treating their experiences as *teacher* professional development. Also having observed that supervisors

benefitted from the opportunity by improving their own practice alongside their student, Langdon (2014) proposed supervision itself could be considered as a professional development opportunity. Supervision can thus be viewed as an opportunity for “reciprocal learning” (Clarke, Triggs and Nielsen, 2014, p.191). I will return to this theme in the presentation of my findings.

To respond to students’ current development needs while facilitating interpretations of practice to ensure learning takes place requires collaborative interactions (Maynard and Furlong, 1995). Clarke and Jarvis-Selinger (2005) indicated a shift towards collaboration was beginning to happen in Canada, although it was less evident in secondary teachers. Reporting on a project into Newly Qualified Teachers’ [NQTs] supervision that took place in Ireland, O’Doherty and Deegan (2009) found a willingness among these supervisors to act in a collaborative fashion. However, they noted that actual progress towards collaborative interactions was slow. Furthermore, Ambrosetti and colleagues found that indications of a shift towards more collaborative interactions had yet to be reported in the international literature on supervision (Ambrosetti, Knight and Dekkers, 2014, p.236).

Supervisors who actively encouraged collaboration, exposing students to critical perspectives on practice, were viewed as “agents of change” by Cochran-Smith (1991, p.285). Collaboration is more than altering actions, it requires a change in perspective. With the purpose of changing supervisor practice to a co-constructive model, the New Zealand pilot study (Sankar, *et al.*, 2011), (to be discussed later), designed professional development to stimulate educative mentoring.

Maynard and Furlong (1995) in their study highlighted the importance of supervisors encouraging students to apply in their immediate context the knowledge that they had acquired to date from different sources. They also saw supervisors as needing to: act as a critical friend; provide constructive feedback; stimulate self-awareness; and, having established an

understanding of students' potential, implement sufficient challenge. Other studies have also stressed the need to provide sufficient challenge and have found that 'nurture-dominant' supervisors may fail to achieve this (Jones and Straker, 2006; Clarke, Triggs and Nielsen, 2014).

Using quantitative research that compared the different forms of supervisory interactions, Richter, *et al.* (2013) established that not only did students find educative approaches to supervision more beneficial than being constantly instructed and directed, these approaches also resulted in beginning teachers who had greater job satisfaction and who were better prepared for the emotional journey ahead. This leads into exploring literature to deliberate why this may be the case. I turn now to look in more detail at the topic introduced in the preceding paragraph of providing appropriate challenges.

2-5.4 Challenging Support

While emotional support is vital to students, authors such as Furlong and Maynard (1995), Cameron-Jones and O'Hara (1995a, 1997), and Fischer and van Andel (2002) have empirically established that students must also be challenged. By comparing supervision interactions, Cameron-Jones and O'Hara (1995a, 1997) categorised them as either 'supportive' or 'challenging'. Supportive interactions involve empathy and are encouraging, while challenging interactions involve confronting a student's assumptions to raise questions and create cognitive conflict. Drawing upon the work of Dewey (1910), Cameron-Jones and O'Hara (1995a, 1997) viewed challenging interactions as valuable and as contributing to student learning.

From their comparisons, Cameron-Jones and O'Hara (1995a, 1997) concluded that "students' cognitive growth is likely to be encouraged by high degrees of support combined with high degrees of challenge" (Cameron-Jones and O'Hara, 1997, p.22). Yet, in exploring the balance in Scottish supervisory interactions, Cameron-Jones and O'Hara (1995a, 1997) found only high degrees of support. Although Fischer and van Andel (2002, p.3) identified research promoting both, the authors surmised that challenge was

omitted to protect both pupils' learning and students' feelings arising from potential gaffes and difficulties, part of a supervisor's "double loyalty". The prioritising of pupils' learning over students' learning was attributed to the short-term nature of a student placement. The general trend across the international literature has continued to note this dominance of supportive interactions (Hobson, *et al.*, 2009).

Supervisors with a strong nurturing perspective would provide high degrees of support, which students appreciated (Izadinia, 2015a, 2015b) and was not a concern (Cameron-Jones and O'Hara, 1995a, 1997); but does this mean they were unable to also offer high degrees of challenge? The nurturing perspective is based on trust and care, to reassure with honesty and promote curiosity, facilitating achievable challenges rather than criticism (Clarke and Jarvis-Selinger, 2005). Haggarty's (1995) study of supervisory discussions confirmed that honesty especially was vital for student learning to progress. From this description, nurturing supervisors should be offering challenge so the question becomes: do supervisors have sufficient awareness of, and knowledge about, challenging tasks? Cameron-Jones and O'Hara (1995a, 1997) thought not, reaching the conclusion that to enable supervisors to effectively utilise challenging tasks, they required professional development.

Feiman-Nemser and Carver (2012, pp. 357-8) also pointed out that supervisors needed "skill in observing and analyzing teaching as well as working with adult learners". From documenting a critical incident with an early career teacher, Schmidt (2008) presented a clear illustration of the impact the presence, or not, of these skills in a supervisor can have on an individual's progress.

Cameron-Jones and O'Hara (1995a, 1997) were not alone in categorising feedback. Research by Voerman, *et al.* (2012; 2014), Hattie and Timperley (2016) and Beek, Zuiker and Zwart (2019) built towards more detailed categories. Both Voerman, *et al.* (2012; 2014) and Beek, Zuiker and Zwart (2019) delineated: progress feedback, (compares current practice with previous practice); discrepancy feedback, (compares current practice with

target practice); a continuum of 'feedback specificity', (specific to non-specific reflecting the degree of focus on specific elements of practice); and 'feedback load', (the balance between positive and negative feedback). They concluded that, in general, feedback needed to be weighted towards 'the positive' and 'the specific'; and they observed that the balance between 'progress feedback' and 'discrepancy feedback' needed to be carefully tailored to the individual, agreeing with Marton's (1996, p.54) emphasis of the necessity to consider the individual student's stage of development. These two categories of feedback, progress and discrepancy, lead nicely into the final form of support, assessing a student's practice.

2-5.5 Assessing

In this section, the assessment of students refers to both formative and summative assessment of their skills and competence with regard to their practice. Assessing students sounds very straightforward and yet, as research reported by Haigh, Ell and Mackisack (2013) and Haigh and Ell (2014) confirmed, it is actually a complex and multidimensional activity.

Assessment of students' practice on placement has two purposes: to focus and enable professional development and to provide a definitive statement of competency (Haigh, Ell and Mackisack, 2013; Haigh and Ell, 2014). To support professional development, an observer delivers a critique of the lesson as formative feedback. This formative feedback can take a form ranging from direct instruction giving technical support to collaborative discussion giving educative support. By focusing upon progressing the student's practice the feedback has the purpose to "scaffold and promote development and growth" and, ideally, develop self-reflection (Tillema, Smith and Leshem, 2011, p.141). Lesson observations followed by formative feedback should occur throughout the placement period by the class teacher, by the supervisor, and by the university tutor when they visit towards the end of placement.

While a lesson observation by the university tutor does provide a student with formative feedback, it also has the purpose of contributing to the appraisal of a student against the professional standards of competency. This is the summative assessment of students across the whole placement to provide a definitive judgement of their practice. For many ITE providers, the summative assessment aspect explicitly involves both the university tutor and the supervisor, and at least implicitly involves the student through their Professional Development Portfolio [PDP], the compilation of evidence illustrating their placement learning. (For further discussion of the alternative assessment purposes the PDP may play in other contexts, see Smith and Tillema (2003, 2007).)

Turning to the supervisors' perspective, Smith (2001, p.314) reported supervisors found summative assessment of students as an "onerous" activity. Jones (2001) and Fischer and van Andel (2002) reported that supervisors found their involvement in the process interfered with their relationship with students and Haigh and Ell (2014, p.19) found supervisors were "reluctant to fail" students.

The difficulty of using lesson observation for formative or summative assessment is the subjective nature of assessing observed practice. Courneya, Pratt and Collins (2008) began their research with the proposition that university teachers rated the quality of the practice they observed in terms of how closely it correlated with their own. They then found that the critique of the observed practice was considerably influenced by the teaching perspectives of the observer. Applying these findings concerning university teachers to school supervisors, they suggested that a student should teach the supervisor's way to be considered 'good'. Investigating this matter from students' perspectives, in Elder and Chalmers' (1987) study students were found to adapt to the supervisor's practice partly to ensure a positive relationship and partly to receive favourable formative feedback that would point towards a successful summative assessment outcome. However, in surveying teachers Cameron-Jones (1980) found that teachers did not

accept responsibility for warning a student of the potential failure of their placement.

Another issue, identified by Rippon and Martin (2003), was that students felt that asking for support would impact negatively upon their summative assessment outcome.

The preceding paragraphs have surfaced a number of key problems in supervision. In summary, students may be given: a false picture of their developing abilities; tasks that are too simple to stretch their thinking appropriately; and formative and summative assessments which create issues for maintaining the quality of teachers.

A way ahead to address these difficulties may be found from the following Scottish studies. The first study was small-scale (7 students and their supervisors) and explored a mid-placement review. This was a version of the summative assessment process which had been repurposed to enable the supervisor and university tutor to jointly discuss with the student their progress to date over the placement without either the pressure of a conclusive outcome or “without the impediment of lesson observation to distract from the longer-term issues” (MacDougall, *et al.*, 2013, p.243). MacDougall, *et al.* (2013) found that this formative activity resulted in students and supervisors having an improved understanding of summative assessment expectations. Based on these findings, they recommended more joint working between supervisors and university tutors when assessing student competency.

The second, similar but much larger project (100 students, 116 supervisors, and 14 university tutors) presented convincing findings of the value of a ‘tripartite dialogue’. The tripartite dialogue occurred when the supervisor and university tutor gave formative feedback together after they had jointly observed the student deliver a lesson (Mtika, Robson and Fitzpatrick, 2014). Mtika, Robson and Fitzpatrick (2014) found that it created an improved

shared understanding between the supervisor and university tutor which resulted in more consistent expectations when critiquing students' practice.

While both MacDougall, *et al.* (2013) and Mtika, Robson and Fitzpatrick (2014) found that tripartite dialogue could be effective in providing necessary understanding and standardisation of formative feedback and summative student assessments, the larger project by Mtika, Robson and Fitzpatrick (2014) had observed that its use had been supported by considerable professional development. This had involved supervisors and university tutors engaging jointly in events focused on developing clarity of roles and responsibilities for all participants. However, supervisors indicated that they would have welcomed a more central emphasis on lesson observation and the related tripartite discussion.

Additionally, Mtika, Robson and Fitzpatrick (2014) discovered that a tripartite dialogue positively contributed to addressing feelings of inequality in the partnership. Arguing that teaching was more than just demonstrating knowledge and skills, and that a teacher needed to respond to the immediate, unique demands of an individual classroom, Smith (2007) viewed a tripartite dialogue as utilising these different yet equal contributions of the tutor and supervisor. Having set out to increase joint working in Norwegian schools, Smith (2007) concluded that a tripartite dialogue eased the tension arising from the university tutor customarily assuming the dominant position.

It is interesting to note here that the use of a tripartite dialogue had in fact been proposed much earlier by Cameron-Jones (1982a), prompted in part by participants in her supervisor training workshops describing tutors "as strangers" (Cameron-Jones, 1982b, p.25). In effect, these later projects were 'reinventing' the tripartite dialogue and presenting empirical evidence of its value.

In England, by contrast, where schools are now officially designated as the dominant partner, the universities' solution to the difficulties with coordinating assessment between schools and universities has been to implement

supervisor training alongside rules and monitoring for quality assurance (Ellis, 2010). In Scotland, with a policy of an equal partnership, the approach taken to summative assessment has involved the implementation of a joint placement report (Black, *et al.*, 2016, p.31). While this was positively received by teachers, Black, *et al.* (2016, p.31) noted that they also found that completing this form added to teachers' workload pressures.

2-6 Supervisor Professional Development

In this section I concentrate principally upon professional development research that has focused upon post-lesson observation feedback as this proved to be a central area of activity for the teachers in my study.

Returning to the Moray House Pilot discussed earlier, while training supervisors did result in an improvement in student practice, Cameron-Jones and O'Hara (1995b, p.9) conceded that "although not all the evidence was in favour of the pilot, the balance of the evidence, in our judgement, was." However, there has since been research with statistically significant evidence of trained supervisors having a more positive impact on student development than supervisors who did not receive training; for example, studies by Evertson and Smithey (2000) and Giebelhaus and Bowman (2002). Both studies used a quasi-experimental design and a professional development course designed to develop skills in educative mentoring. The research results added weight to the belief that training to develop specific mentoring skills was effective.

The first study focused upon the secondary school stage. Evertson and Smithey (2000) formed two groups from 46 supervisors, with one group undertaking four days of professional development, supported by follow-up meetings during the year. All participants had their post-lesson observation discussions recorded and weekly reflective journals by both supervisor and student were included in the analysis. From their data, Evertson and Smithey (2000) established that the intervention supervisors had become more skilled

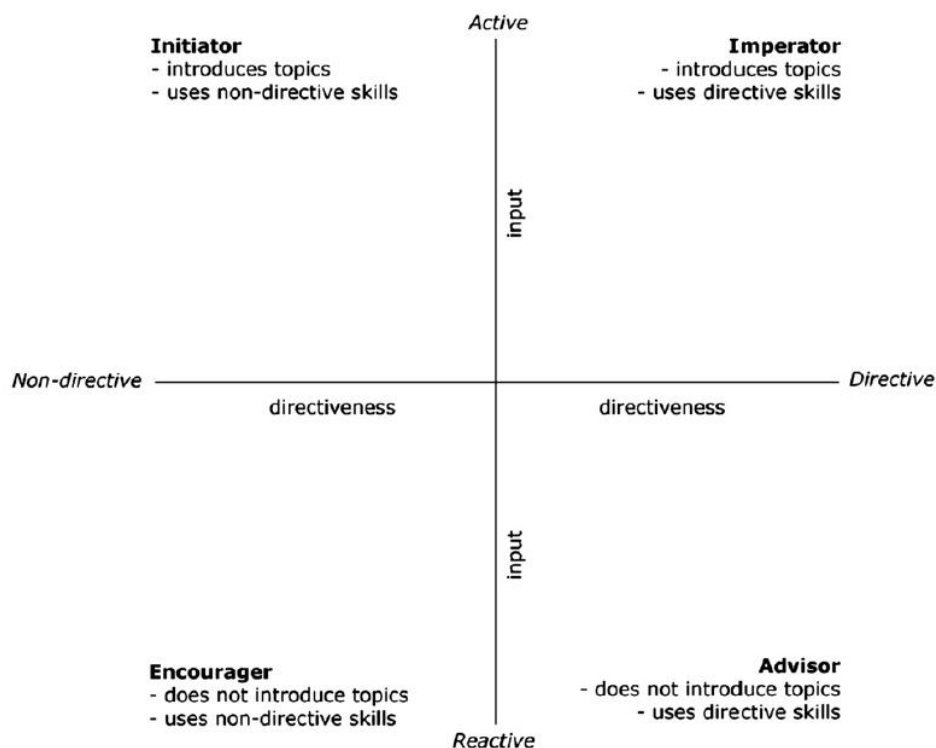
in guiding their students to be successful, (measured by the improvements in student practice), than those without the training.

The second study involved a similar structure, with 29 supervisors from both primary and secondary school stages. The professional development design used by Giebelhaus and Bowman (2002) involved ten sessions, each lasting three hours, spread over the nine weeks of the placement. Similar to the first study, Giebelhaus and Bowman (2002) provided results that indicated that the training had made a positive impact, but they also conceded that this impact varied between individuals.

The research discussed by Harrison, Lawson and Wortley (2005a, 2005b, 2005c) and Harrison, Dymoke and Pell (2006) based on NQT mentors in secondary schools in England, involved mentors in professional development comprising three sessions over the year. While three sessions resulted in a very small intervention, this research did inform a larger and more complex project by Crasborn, Hennissen, Brouwer, Korthagen, and Bergen.

This research team constructed a two-dimensional model, shown in Figure 2-3, for a supervisor's involvement in a post-lesson observation discussion. This framework enabled supervisors to record for analysis their role in the discussion both before and after a targeted professional development programme (Crasborn, *et al.*, 2008, 2010, 2011; Hennissen, *et al.*, 2010, 2011).

Figure 2-3 The MEntor (teacher) Roles in Dialogues (MERID) model



(Crasborn, *et al.*, 2011, p.322)

This professional development programme took the form of supervisors working together to analyse and then develop their own practice guided by the model set out in Figure 2-3. Overall, the team's programme had positive results, and they again noted that training produced different degrees of improvements at an individual level. Some participants were seen to need to make greater use of the 'non-directive' actions of initiating and encouraging.

Also focused upon the mentoring of provisionally registered teachers¹², the New Zealand Induction and Mentoring Pilot Programme¹³ is of interest because the professional development occurred over a two-year period with

¹² In Scotland, the term used is 'Probationer' and in England, it is 'Newly Qualified Teacher'. These are individuals in their first year teaching after completion of an ITE/ITT course.

¹³ <https://teachingcouncil.nz/content/induction-and-mentoring-of-provisionally-registered-teachers-pts>

participants individually committed to undertaking an action research project designed to stimulate educative mentoring. This professional development was broken into a number of 'learning cycles', each consisting of a 'conversation theme' to build mentors' awareness of, and skills in, post-lesson observation discussions. Having established that mentoring quality was inconsistent and that there was a lack of training available, this pilot programme began with the assumption that training mentors would have a positive impact on new teachers (Sankar, *et al.*, 2011). As one of many researchers involved, Langdon (2010; 2012; 2014; 2015) reported positive evidence of supervisor learning, evident from their closer attention to applying co-constructive approaches to post-lesson observation discussions. Just like the individual variation found in the Moray House Pilot and other projects, the supervisors developed at different rates, with no correlation to their teaching or mentoring experience. Langdon (2014) considered that the degree of learning was influenced by factors that included the mentor's commitment of time and energy to engage with the action research, and hypothesised that development would only continue if these individuals continued to be supported.

Based in U.S. secondary schools, Erbilgin (2014) interviewed three experienced supervisors before and after they participated in a 15-week professional development programme that involved both online and face-to-face meetings and analysed recordings of their post-lesson observation discussions. Although the intervention helped the supervisors to be increasingly 'educative', Erbilgin (2014) concluded that such professional development needed to be over a longer time-frame.

Research into the impact of professional development for supervisors has been able to show positive results. It needs to be noted, however, that there was variation across these professional development programmes in their length, in the nature of the input, and the degree of commitment required of the supervisors. Like Feiman-Nemser and Carver (2012) and Izadinia (2015a, 2015b), Langdon (2014) believed that professional development for

conducting post-lesson observation discussions should be continuous as supervisors' experiences of mentoring increase, requiring also long-term investment to ensure quality. However, many, (for example Hoffman, *et al.* (2015)), warn that cost may hinder implementation.

The necessity for supervisors to have training appears within government reports (Black, *et al.*, 2016, p.32). However, Cameron-Jones and O'Hara (1993, 1994b, 1995a, 1995b) and Christie, *et al.* (2004) concluded that, although valuable, a lack of funding and designated time will mean such professional development will remain rare. This situation is not unique to Scotland as, in summarising the New Zealand pilot's findings, Sankar, *et al.* (2011, p.44) highlighted "the importance of dedicating sufficient time and resources ... in order to increase understanding of effective induction and mentoring practices" and achieve systematic and permanent change.

2-7 Knowledge

Professional knowledge is universally understood as the knowledge base needed to operate effectively in a specific profession (Tamir, 1991) that is developed within that profession's practice (Ellis, 2007). Many authors, such as Shulman (1986) and Tamir (1991), present this knowledge as being very complex, with multiple components that can take many forms and be assigned to different categories. In a similar vein, Ben-Peretz (2011, p.8) concluded that our understanding of teacher's professional knowledge has "expanded and broadened significantly" over time. The following sections will centre on those aspects of a teacher's professional knowledge that proved to be most pertinent to this study's findings, examining how different authors have delineated its component forms.

While knowledge can simply be defined as 'a way of knowing', there exists a wide range of classifications by type, by purpose, or by form. What emerges clearly from the very large body of literature discussing knowledge is that it can be: renewed or maintained or developed; abstract or specific; internal or external; and difficult to transfer or capture. The following pages centre on

those aspects of knowledge that, on reviewing the data, proved to be most pertinent to this study: i.e. tacit knowledge; personal knowledge; codified and uncoded materials; procedural knowledge; theoretical knowledge; strategic knowledge; and pedagogic content knowledge.

Internal to an Individual: Tacit and Personal Knowledge

Both tacit and personal knowledge are formed by an individual as they experience situations. Tacit knowledge is exhibited simply through an individual's actions, so it is commonly described as 'intuition' or 'instinct'. Although similar in nature to tacit knowledge, personal knowledge can be expressed in multiple ways, necessitating the more sophisticated description provided by Eraut (2000; 2004). He considered personal knowledge to be both the product from internally blending life experiences with other forms of knowledge, and "the cognitive resource which a person brings to a situation that enables them to think and perform" (Eraut, 2000, p.114; 2004, p.202). In short, from an experience, an individual may subjectively interpret that experience internally to produce his or her personal version (Skemp, 1987), and, through further mental effort, can choose to apply that knowledge to another experience. Hence, a distinction between tacit and personal knowledge would be that tacit knowledge remains unanalysed while personal knowledge involves some degree of analysis. However, personal knowledge will be tied in with an individual's personal beliefs, perspectives and values, so can be vulnerable to misinterpretation.

Codified and Uncodified Materials

Knowledge that is unable to be conveyed through speech, writing, or pictures, such as tacit knowledge is considered as uncoded, while knowledge that can be so communicated is considered to be coded (Eraut, 2000). This suggests a binary property to each category of knowledge which is not always the case, with personal knowledge being one exception. In articulating their higher-order thinking, teachers share aspects of their personal knowledge as they guide their students towards understanding practice (Edwards, 2014).

Knowledge codified for communication is “significantly influenced by the context and setting in which it occurs” (Eraut, 2004, p.201). For instance, specific information contained in a school’s policy documents and handbooks would be tailored to the school’s context and reflect a specific time period within that school.

A subset of codified knowledge, identified as codified-academic by Eraut (2004), represents knowledge for use in university academic assignments rather than the wider world. Day (1999) expressed concern that codified-academic knowledge was perceived to dominate the theoretical knowledge of teachers. As both McIntyre (1991) and Tamir (1991) point out, the codified-academic knowledge used by an ITE course typically contains research-based theoretical knowledge that has been abstracted and generalised to a degree where its application in a specific context, such as a classroom, is not straightforward. Shulman (1986) maintained that this feature of codified-academic knowledge was a weakness when attempting to apply it in a specific learning and teaching situation.

Practical Experience: Procedural Knowledge

Grimmett and MacKinnon (1992) developed the argument that a teacher needs practical experiences which they analyse to develop their professional knowledge, described as “teaching sensibility”, rather than a knowledge of propositions” (Grimmett and MacKinnon, 1992, p.393). This forms “a framework for helping prospective and experienced teachers develop their repertoire of responses, understandings, and magical tricks” (p.441). Clearly, this can be viewed as a form of procedural knowledge.

The procedural component of professional knowledge encompasses the information and skills that guide and shape a teacher’s actions. There are different grades to this information and these skills. The lowest grade, for instinctive actions, would be tacit, as discussed above. Marton and Pang (2006, p.194) have questioned the extent of the contribution of this tacit knowledge, stating that: “It is not possible to act professionally without being

able to distinguish between what must be done and what might be done to achieve one's professional aims and carry out one's professional duty".

Instead of applying a programmed habitual response to a situation, a teacher searches their personal knowledge base for alternative responses, analysing options and their potential outcomes. This results in a logical selection of a response that they are capable of justifying.

When this selection occurs within the lesson, the response would be "specific-context" as the line of action is based upon information gained as the situation unfolds (Rabinowitz and Glaser, 1985, p.22). This process of selection has close links to Schön's (1992) theory of *reflection-in-action*. On the other hand, a teacher planning in advance to circumvent potential issues based upon knowledge from similar previous experiences, would draw on "general-context" strategies (Rabinowitz and Glaser, 1985, p.22). In either case, the resultant knowledge is linked to both the experience and its context, so could be considered as *problem-solution* knowledge (Anderson, 1987). This gives rise to a grade of procedural knowledge that is tied to context, a dependency that creates significant barriers for its application in other contexts; and the greater the difference between contexts, the more difficult the application becomes (McCormick, 1999).

Abstraction: Theoretical Knowledge

Logically, forming knowledge that is only useful in similar situations necessitates a vast knowledge base which could overwhelm the working memory of an individual (Anderson, 1987). Instead, the professional knowledge of a teacher needs flexibility, a degree of abstraction so that it can be reused or adapted in response to similarities or differences perceived in the new situation (Marton, 2006, p.531). To pursue abstraction is to generalise and form theoretical knowledge. Shulman (1986) points out that, as a category of teacher professional knowledge, theoretical knowledge makes an important contribution due to both its implications for practice and its formation from practice.

To explain this relationship between theoretical and procedural knowledge and their contribution to professional knowledge, Tamir (1991) presented them as lying at the opposite ends of a continuum, suggesting that one evolves into the other. Day's (1999) argument that teachers develop theoretical ideas about their experiences of practice through their application of reflection would seem to entail that theoretical knowledge can evolve from procedural knowledge. However, Roth (2010) argues that there is not movement in the reverse direction, claiming that teachers cannot develop procedural knowledge from theoretical knowledge. Ryle (2009) presented a situation of two individuals who had the same theoretical knowledge about practice but displayed different levels of competency, and argued this represented differences in their procedural knowledge, implying that professional knowledge is more than putting theoretical knowledge into action. Entwistle, *et al.* (2000) proposed that a teacher's prior experience as a learner strongly influenced their conceptions about teaching, as these prior experiences had formed into personal knowledge through which their newly-acquired professional knowledge was interpreted (Tamir, 1991).

In challenging the continuum proposal, Olsen (2014) suggested that a teacher was not converting one into the other but actually blending what they are experiencing in practice, their procedural knowledge with their theoretical knowledge. Roth (2010), in a multisite study exploring the development of competent practitioners, labelled this blending technique as 'reflection'.

Strategic Knowledge

Returning to the matter of a teacher making "a logical selection" (p.56), this would involve what Gott (1988, p.100) described as "strategic (or how-to-decide-what-to-do-and-when) knowledge". Gott proceeded to describe this knowledge as a control function, separate to, but with links to, procedural and other types of knowledge. Strategic knowledge is used for problem-solving, so is essential for navigating unpredictable and complex activities, such as teaching (Gott, 1988). Shulman (1986, p.13) argued that a teacher experiences cognitive conflict, triggering reflective self-examination, when

presented with a situation where neither their existing theoretical nor procedural knowledge can provide *the* answer. This results in the formation of strategic knowledge, the third form of knowledge he viewed as constructing a teachers' professional knowledge. However, to form strategic knowledge an individual first has to devote a substantial amount of effort into analysing their experiences (Brookfield, 1998). Due to the significant mental effort involved in its formation, the value an individual places on strategic knowledge must outweigh the lesser effort of just acquiring more basic procedural knowledge (Anderson, 1987; Eraut, 2004). McCormick (1997) proposed that teachers discuss their own decision-making with learners to raise their appreciation of this strategic knowledge.

Pedagogical Content Knowledge

A number of the forms of knowledge discussed in the proceeding sections are drawn together in Shulman's (1986) construct of pedagogical content knowledge. In his discussion of the content knowledge of teachers, or '*what*' a teacher needs to know, Shulman (1986) identified three possible sources of this knowledge: subject matter; pedagogic; and curricular. The intersection of these sources, where they impact upon and are impacted by each other, is termed pedagogical content knowledge (Gudmundsdottir and Shulman, 1987). Pedagogical content knowledge encompasses what a teacher needs to know so that they can plan, teach, and assess effectively for learners at a specific stage in a specific subject area. Pedagogical content knowledge thus focusses on subject matter *and* on how best to engage learners with that subject knowledge. Writing in 2004, Shulman recognised that he had employed this construct in a 'strictly cognitive and individual' manner' in his earlier work and that there was a "need to frame a more comprehensive conception of teacher learning and development within communities and contexts" (Shulman and Shulman, 2004, pp.258-9).

2-7.1 Summary

Reflection can thus be viewed as blending theoretical and procedural knowledge to produce professional knowledge which is personalised in terms of each individual using their beliefs, perspectives and values. This personal-professional knowledge is subsequently used by an individual to inform their practice. For example, two teachers experiencing the same situation will interpret the professional knowledge associated with that situation differently, developing their personalised version of it. Similarly, two teachers planning practice each draw on their personal-professional knowledge and so will execute the practice differently. Hence, the existing beliefs, perspectives and values of a student, together with the examples of practice they observe in the classroom, will influence any professional knowledge gained through their placement and their resultant competency as a teacher. Within professional knowledge, there is a strategic component achieved through detailed analysis of experiences, through in-depth reflection.

Reflection, described by Dewey (1910, p.2) as “truly educative in value”, cultivates understanding, with learning as a continuous process. Marton (2006) reasoned that without reflection the learning of knowledge would focus on remembering facts for rote learning; and the learning of skills would focus on training in techniques. Pursuing the theme of reflection, the next section looks closely at its relationship with the processes of teaching and learning.

2-8 Teaching, Learning, and Reflection

As I examined the different ways to conceptualise knowledge that were relevant to interpreting the data of this study, I came to appreciate that the processes of teaching and learning required consideration in conjunction with the process of reflection. Indeed, models of teaching and learning differ according to how knowledge is viewed, differ in relation to an individual's epistemology. These models also point up how different depths of understanding may be achieved based upon the degree of effort applied. I

begin with a discussion of the teaching and learning models before progressing on to discuss reflection.

Firstly, knowledge can be viewed as a fixed, external object that can be chunked into small pieces. Teaching occurs when these chunks are transmitted to a learner and learning occurs when these chunks are acquired by a learner. These form the transmission/acquisition models of teaching/learning, dictating fixed roles for a teacher and their learners as learning is depicted as 'one-way' (Rogoff, 1994) and knowledge as something to be 'possessed'. In this situation, Hager (2005) classifies learning as 'a product', or more exactly, learning is a product of an individual's internal cognitive processes (Illeris, 2009). Ellis (2010, p.106) found that teachers who followed this model limited the scope of learning, as they focused upon assessing the direct application of these newly acquired chunks of knowledge.

Secondly, knowledge can be viewed as dynamic, created together by a teacher and learners. Teaching and learning occur simultaneously "as a collaborative, communicative process of design and discovery" (Schön, 1992, p.133). Rather than being confined to the labels of *teacher* and *learner*, each individual has a flexible, yet active, role as knowledge is mutually constructed *between* individuals. This model of learning is described by Illeris (2009) as an external, social interaction process between individuals.

Lave and Wenger (1991, p.49) refer to "learning as increasing participation", while Rogoff (1994, p.209) captures the dynamics of the interaction in the phrase "transformation of participation".

Rogoff (1994) has argued these two models of transmission/acquisition and of participation can coexist. It is not a case of *either/or*; the use of one model does not prevent the subsequent use of the other. Findings presented later in this thesis reinforce this point. She has also observed that the effectiveness of either model is dependent upon the effort that each individual invests. For example, viewing knowledge as dynamic means using energy to discuss a student's experience with them, but a student choosing to uncritically acquire

this feedback uses minimal mental effort. Hager (2005, p.842) conservatively explained that: “it has been suggested that neither the concept of individual learning nor of communal learning might be, by themselves, sufficient to account for learning at work”; whereas Illeris (2009) was explicit that the active involvement of both a transmission/ acquisition model and a process of participation was essential for learning to occur.

While an experience offers an individual the opportunity to learn knowledge (Kolb, 1984), for an individual to understand an experience, the process of knowing, requires mental effort. Without mental effort individuals simply reproduce habitual actions; whereas with a degree of mental effort they attempt to make sense of the experience, an understanding which they then use to adjust their behaviour in response to varying conditions (Entwistle and Marton, 1989).

A commonly occurring experience requires only the most minimal of effort to give an intelligent re-enactment and to action typical adjustments, (i.e. in such a case the teacher is barely aware of the reasoning behind their actions). This is referred to by Schön (1992) as *knowing-in-action*. While Schön (1992, pp.49-54) relates *knowing-in-action* to Polanyi's (1966) tacit knowledge, he offers an account that is more in line with constructing the lowest grade of procedural knowledge, i.e. knowledge that involves at least some degree of analysis to enable the selection of a suitable response from our existing set of possible responses (Schön, 1992, p.124).

Krathwohl (2002) states that there is a direct relationship between mental effort and cognitive complexity; as individuals increase the intensity of their mental effort, they increase the depth and complexity of their understanding. By increasingly investing mental effort in their learning, an individual increasingly becomes aware of their knowledge base. This carries the additional benefit, (as pointed out by Glaser and Bassok (1989)), of creating a sense of satisfaction. (As a cautionary note on Glaser and Bassok's (1989) observation, it may also be the case that the more a person is aware of their knowledge base, the more they realise its limitations which may create a

sense of dissatisfaction.) When individuals apply a great deal of mental effort, they explore their understanding in depth and from different angles, resulting in the most critical and complex forms of reflection (Marton, 1979).

It is important also to consider *when in time* the reflection occurs. Initially, Schön (1983/2008) discussed reflective practice as practitioners engaging in conscious thought on how to respond to a surprising event as it occurs, *reflection-in-action*, or at some time period after it had occurred, *reflection-on-action*. The former contributes to the “specific-context” component of procedural knowledge while the latter contributes to the “general-context” component (Rabinowitz and Glaser, 1985, p.22). Both are considered as *problem-solution* knowledge (Anderson, 1987). Dewey (1925/65) had earlier described reflection as casting light upon an initial experience, deepening it so that multiple solutions are developed and accessible for testing within future experiences, signalling that reflection is a problem-solving process.

In his later work, Schön (1992, p.123) discussed some of the “increasingly complex components” of reflective practice. He clarified that *reflection-on-action* included “a process of getting in touch with the understandings we form spontaneously in the midst of action”. He had termed this process as “*reflection-on knowing-in and reflection-in-action*” (Schön, 1992, p.126). Teachers consciously reflect both on the surprising event and on their way of thinking and acting in response to that event after it has occurred.

Killion and Todnem (1991) drew attention to *reflection-for-action*. The term *reflection-for-action* highlights the outcomes from *reflection-in-action* and *reflection-on-action*. When we *reflect-for-action*, we examine “our past actions and our present actions... [to] generate knowledge that will inform our future actions” (Killion and Todnem, 1991, p.15). Reflection, then, is a process that encompasses all time designations, past, present, and future simultaneously. *Reflection-for-action* also involves not just conscious thought on *how* to respond but also a weighing up of the potential *outcomes* of the response, both using and further developing strategic knowledge. In my view, Killion and Todnem (1991) are offering a clarification, making explicit that

crucially *reflection-on knowing-in* and *reflection-in-action* result in understanding of complex and unpredictable situations sufficiently to build strategic knowledge used to improve future practice (Gott, 1988). As Ryle (2009, p.18) pronounces: “we often do not only reflect before we act but reflect in order to act properly”.

Attention also needs to be given to *where* reflection occurs; self-examination can be a private matter or take place in dialogue with others (Day, 1993, 1999). Day (1993) observed that learning to teach required more than the student gathering feedback to puzzle over. To select an appropriate response requires knowledge of a considerable range of possible responses, i.e. access to domain-specific knowledge (Glaser, 1984). A student may gain access to such knowledge by their supervisor engaging her or him in “reflective conversation...stimulating him [sic] to reflect on his own knowledge-in-practice”(Schön, 1983/2008, p.346). Thus Day (1993) argues for reflection in collaboration with others, as an analytical *social* process that widens the professional knowledge base, and hence the range of opinions and therefore options, upon which the learner can draw. This important insight will reappear in the following Findings chapters and in the final Discussion chapter.

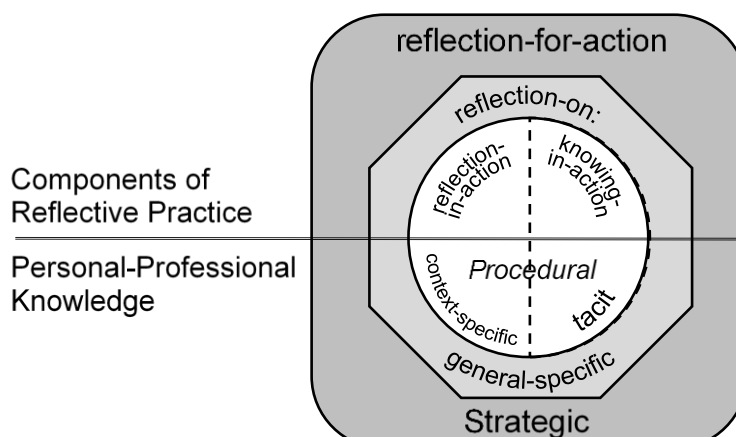
In addition, requiring the individual to confront, acknowledge, and face up to concerns is a necessary component of reflection (Day, 1993, 1999). Thus, a student who only reflects in private is restricted in what they are able to confront and may potentially form misconceptions (Day, 1993, 1999). As Edwards (2014, p.50) reasons, “what we learn will depend on what we are capable of recognizing”. Consequently, students reflecting alone may inhibit their own growth as they may be unable to challenge their value systems and lack the benefit of being pushed to confront difficult issues (Leitch and Day, 2001). In a similar vein, the stance both Ryle (2009) and Sosa (1997) take is that the social process of reflection makes the resultant personal knowledge more powerful.

While articulating in dialogue the links between experiences undeniably develops conceptual understanding that improves practice, collaboration demands a combination of complex skills of reflection and articulation (Edwards, 2014). The ability to listen actively, articulate reasoning, collaborate, and stimulate deep thinking necessitates “a high level of skill that cannot be assumed” (Timperley, 2010, p.122). Recognising that using these complex skills in combination is not a simple task for students, Nilssen, Gudmundsdottir and Wangsmocappelen (1998), (drawing on the work of Cole, *et al.* (1978)), proposed that supervisors expedite students’ development by scaffolding their discussions. However, Olsen (2014) established that a student has the additional complexity of negotiating their understanding from often-competing sources and contexts. Framing reflective practice as the ability “to adopt other perspectives across boundaries and time”, Wenger (1998, p.217) concludes that more of a two-way, than one-way, discussion would assist a student in their negotiations.

Day (1999, p.222) has also argued that reflection in collaboration “is essential to building, maintaining and further developing the capacities of teachers to think and act professionally over the span of their careers”, suggesting that reflective discussions benefit teachers at all stages of their careers. Olsen (2014) has set out a very similar argument for the value of continuing, collaborative reflection throughout teachers’ careers.

At this point it is appropriate to return to Schön’s (1983/2008, 1992) work on reflective practice, as it provides a fitting summation of a number of themes that have been addressed in this section. Figure 2-4 presents my representation: of the key components of his account of reflective practice; and of how teachers’ growing awareness of what they are doing and why links to the different types of personal-professional knowledge.

Figure 2-4 Representation of Key Components of Reflective Practice and Relations to Knowledge



One possible line of critique of Schön’s work and other writings on the processes of reflection is that they do not provide a sufficiently incisive overview of the content and focus of reflection. Brookfield’s landmark text on *Becoming a Critically Reflective Teacher* (1995, 2017) gives a more radical edge to the theme of reflection. While his account of what critical reflection entails was directed principally to higher education, his work can be seen to be of central relevance to teaching in schools. It points up the need not simply to pursue, however skilfully, existing teaching practices but to loosen the bonds of these practices by examining them with a critical, penetrating eye. Guided by the findings of the present study, this is a question that will be taken up in the Discussion chapter.

For Brookfield, critical reflection is one aspect of “the larger process of reflection” (Brookfield, 1995, p.2). He sees reflection as involving the hunting of assumptions, “taken-for-granted beliefs about the world and our place within it” (Brookfield, 1995, p.2); and he identifies three classes of assumptions.

Paradigmatic assumptions are “the structuring assumptions we use to order the world into fundamental categories” (Brookfield, 2017, p.5). One of the illustrations he gives of a paradigmatic assumption is the belief that “adults

are naturally self-directed learners” (Brookfield, 2017, p.5). The models of teaching and learning discussed in the preceding pages would also seem to fit exactly within this category of paradigmatic assumptions. He notes that there may be a great deal of resistance to examining such paradigmatic assumptions, but that doing so can be transformative (Brookfield, 2017, p.6).

Prescriptive assumptions, such as the belief that “all education should promote critical thinking” are “often grounded in ... our paradigmatic assumptions” and centre on “what we *think* ought to be happening in a particular situation” (Brookfield, 2017, p.6). Brookfield provides a vaguer definition of the third class of assumptions, describing *causal assumptions* as concerning “how different parts of the world work and about the conditions under which these can be changed” (Brookfield, 2017, p.7). However, the examples he provides of causal assumptions seem to indicate that what is at stake here are beliefs that specific teaching actions will guarantee particular learning outcomes, for example, “using learning contracts increases students’ self-directedness” (Brookfield, 2017, p.7).

Guided by the tenets of critical theory, Brookfield sees *critical* reflection as being defined by a focus on power and hegemony (Brookfield, 2017, p.9). Critical reflection brings teachers to be aware of how “educational processes and interactions are framed by wider structures of power and dominant ideology” (Brookfield, 2017, p.9). Unhelpful hegemonic assumptions that he uncovers include: the construction of teaching work as fulfilling a vocation (Brookfield, 2017, p.17); the concept of teachers being able to control learning (p.43); and the belief that it is teachers’ responsibilities to remove student resistance to learning completely (p.49). In addition to highlighting the need to uncover such overarching hegemonic assumptions, Brookfield brings attention to how power operates at the micro-level of the classroom, urging us to consider “when its exercise opens up new possibilities, and when it closes them down” and “what constitutes an ethical and justifiable use of teacher power” (Brookfield, 2017, p.27).

Not content with delineating what critical reflection entails, Brookfield also sets out the means by which our critical vision can be sharpened. He identifies *four lenses of critical reflection* (Brookfield, 2017, p.61). The first, and most important, lens he identifies is that of *students' eyes* (Brookfield, 2017, p.62). He sees a continual striving to discover how different students are experiencing their learning as “the essence of student-centered teaching” (Brookfield, 2017, p.43). Here it is centrally important to be aware of power dynamics in the classroom from the students' perspectives. Resonating with the work that has been reviewed in a preceding section on the value of collaborative reflection, he views *colleagues' perceptions* as another powerful lens that can widen critical reflection. He notes how critical friends can assist in the examination of assumptions and can open up new perspectives (Brookfield, 2017, p.66). Close attention to our *personal experience* of learning is also understood to be a valuable source for critical reflection on teaching practice and students' experiences of learning (Brookfield, 2017, pp.69-72). Brookfield recognises that his fourth lens of critical reflection, *theory*, “is the hardest sell” (Brookfield, 2017, p.72). He notes how theory can assist one to articulate one's feelings about teaching more clearly, and can be affirming as well as challenging (Brookfield, 2017, p.73). It can also help us to be aware of how we are involved in the exercise of institutional power (Brookfield, 2017, p.74) and be constructively disorienting, as the following quotation reveals: “Theory can also crash into your life in a productively disturbing way by unsettling the groupthink arising from cultural norms and shared experiences” (Brookfield, 2017, p.74). Brookfield's concept of ‘*hunting for assumptions*’ and the four lenses of critical reflection will feature again in the Discussion chapter.

Before concluding this discussion of Brookfield's account of critical reflection, it is important to note that his strong advocacy of the value of critical reflection is tempered by a recognition of the dangers of “its mandatory measurement” (Brookfield, 2017, p.76). He observes that measuring reflection can become a “power play” where “instead of being a collective journey into mutual ambiguity it becomes a means of aligning individual

preferences and actions with institutional needs” (Brookfield, 2017, p.76). Similar cautionary notes have been sounded by Macfarlane and Gourlay (2009) in their article *The reflection game: enacting the penitent self*, where they point up how formal requirements for reflection may have distorting effects on the practice of reflection, resulting in “an insidious form of performativity” (p.458).

2-8.1 Summary

Earlier in this chapter, knowledge was found to entail many features at many levels. What is clear here is that reflection, as an essential element for learning, is also complex and multi-layered. The degree of cognitive effort applied by an individual to reflection affects the extent of their understanding which, in turn, affects the transferability of the resultant knowledge, whether that be as product or process. In addition, reflection can be viewed as both individualised and shared. An individual negotiates meaning publicly as a social intellectual process and interprets privately, integrating this learning into their existing knowledge. For example, knowledge constructed between individuals has to be internally processed into existing schemas by each individual to form their personal version of that knowledge (Skemp, 1987).

As the professional knowledge required for teaching is by no means fully codified, to view a student as a passive recipient of codified knowledge would not enable a student to achieve the required competency. Rather, the participants of this study made their professional knowledge available to students through their joint involvement in practice which points to social theories of learning. Investigating these theories I came to recognise that Wenger’s (1998) Communities of Practice [CoP] framework could provide a coherent, lucid, conceptualisation of the findings of this study.

2-9 Communities of Practice

The simplest description of a community of practice is: “groups of people who share a concern or a passion for something they do and learn how to do it

better as they interact regularly” (Wenger and Wenger-Trayner, 2015, p.1). Wenger and Wenger-Trayner (2015) define the three essential characteristics of communities of practice as: the domain; the community; and the practice.

The Domain has purpose, values, and an identity. It encompasses the collective interest and shared competence between members, so defining the community’s identity. The community’s identity binds members together, encouraging members to participate and contribute.

The Community is defined by its domain of interest and formed as a result of members engaging “in joint activities and discussions, [to] help each other, and share information. They build relationships that enable them to learn from each other” (Wenger and Wenger-Trayner, 2015, p.2). Although members engage in the practice of that community, membership does not necessitate conformity or agreement, as Wenger (1998) is clear that conflict and competition are also involved.

The Practice refers to members’ shared practice that forms the foundation of their community. It has routines and involves reflection. Over time, members jointly develop a body of knowledge from their collective interest in the domain. Wenger (1998) discusses practice as members investing their identity as they engage in negotiating meaning. This is a constantly evolving process involving the duality of participation, (becoming involved in practice and the formation of identity), and reification, (the products of, and the processes for, meaning making).

CoP originated from the exploration by Lave and Wenger (1991) of why apprenticeship, as a learning process without an explicit partnership with ‘teaching’, was so enduring. The authors observed that an apprentice’s learning was evident through a shift in their contribution to the work, or participation, and a parallel shift in their identity. Applying this insight to students on placement, an ITE placement can be viewed as an apprenticeship, and teaching, although a practice usually executed in

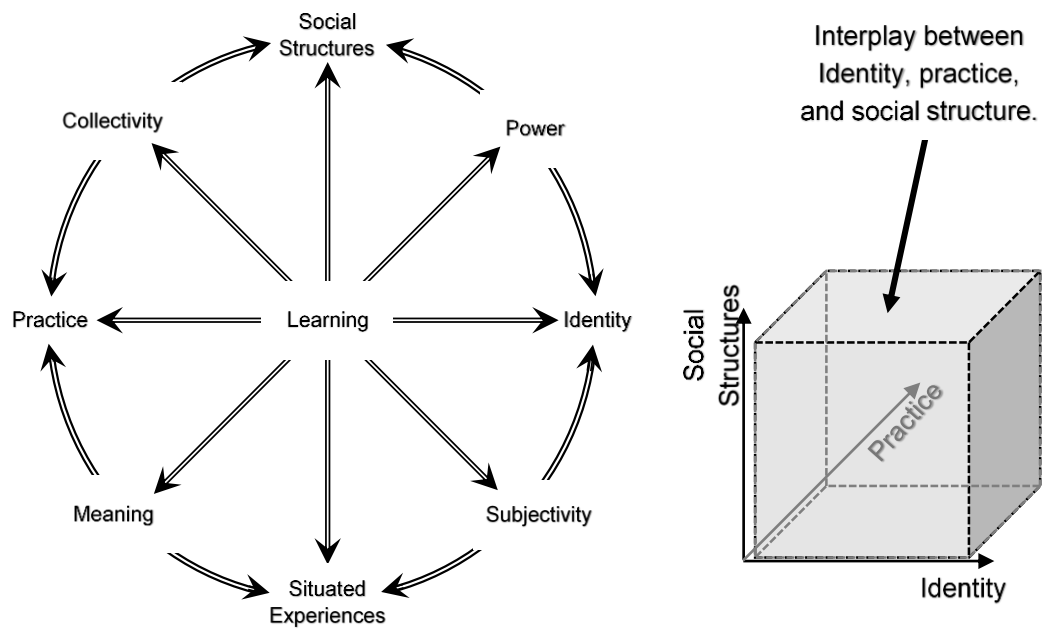
isolation in secondary schools, can be viewed as a social activity in terms of teachers' collective engagement in shaping their practice.

To take the teaching profession as a single community of practice results in a community that Wenger (1998) would consider to be too large to be a unit of analysis. Instead, teachers could be viewed as members of multiple, intersecting communities (Hodkinson and Hodkinson, 2004a). A teacher can be viewed as having membership to intersecting communities, where connections may be formed through the processes of participation and reification. These connections may occur through brokering, where an individual with sufficient legitimacy can introduce "elements of one practice into another" and through boundary objects, "forms of reification around which communities of practice can organize their interconnections" (Wenger, 1998, p.105).

Wenger (1998) terms situations where there are strong interconnections between individual communities as a 'constellation of communities of practice'. Teaching could be viewed very much as forming such a constellation of practice.

CoP is thus a *conceptual framework* centred upon learning as social participation. Wenger (1998) described this process of learning, or learning as participation, as at the intersection of four theories that are further influenced by two "inseparable dualities" (p.14). From my reading of Wenger, I understand his description as a four-dimensional set of axes, with the lines, planes and spaces between them collectively forming the CoP framework. See Figure 2-5.

Figure 2-5 The Communities of Practice Framework



The 'power' direction of the power/meaning axis represents power relations which are neither just hierarchical nor consensual. Roberts (2006, p.626) describes power as "the ability or capacity to achieve something, whether by influence, force, or control". Power can be exercised through determining the legitimacy of new members, enabling their participation in practice and formation of identity, or smothering their prospects of contributing to the community's practice through negotiating meaning. By contrast, the 'meaning' direction represents ownership of the negotiated meanings produced. Power and meaning form a duality as power plays a vital part in the negotiation of meaning as the negotiations may be dominated by those with full participation (Roberts, 2006). This does not mean that power is static but rather as Marshall and Rollinson (2004, p.73) observed, it is dynamic due to it existing in the relationships between members. By drawing upon the work of Foucault, Fox (2000) also argues that the power is not *in* members, but in their relationships.

The 'collectivity' direction of the collectivity/subjectivity axes represents the form of relationships between members, how their participation contributes a

sense of belonging. In contrast, the 'subjectivity' direction represents how an individual affects, and is affected by, their experiences, their position.

The role identity plays within the CoP framework is significant. Moving for a moment from a close focus on Wenger to look more widely at questions of identity. Day (2004, p.53) describes the professional identity of a teacher as:

who and what they are, their self-image, the meanings they attach to themselves and their work, and the meanings that are attributed to them by others - are, then, associated with both the subject they teach,... their relationships with the pupils they teach, their rules, and the connections between these and their lives outside school.

My understanding of identity aligns with Day, *et al.* (2006), that an individual has a stable core personal identity, shaped from their history, and a flexible professional identity, affected by their personal identity yet reactive to situated learning. Indeed, Day (2004, p.57) was explicit that "identities are not stable but discontinuous, fragmented and subject to change". Considering that "teaching demands significant personal investment", Day, *et al.* (2006, p.603) and Gonzalez and Carter (1996) have argued that personal identity influences the individual's interpretations of practice so contributes significantly to their situated professional identity formation. This implies that common ground in personal histories could provide similar interpretations of practice; similar interpretations that facilitate the mutual understanding necessary for acknowledging participation. This point is stressed by Wenger (1998), Gonzalez and Carter (1996), and Olsen (2014).

To be more in keeping with teachers and the profession, Edwards (2014) found students are expected to adjust their professional identity. Indeed, an individual's identity, as a participant in the community, aligns with that community since participation necessitates learning which transforms identity, creating a cyclic process (Lave and Wenger, 1991). At the same time, Wenger (1998) depicts identities as somewhat fluid and sees identities within a community as co-constructed, rather than wholly formed by one-sided shaping. Applying this insight to students on placement, it may be

possible that both student and teacher identities may be transformed to a certain degree as a result of their interactions.

Following chapters will trace out in detail how the key features of Wenger's framework, in particular how his conceptualisations of identity, practice, participation, and reification have been deployed to frame the findings of this study. First though, the following chapter will present and justify the methodology and research design.

Chapter 3 Methodology and Research Design

3-1 Introduction

With the backdrop of research literature in place, this chapter concentrates on the methodology and research design employed to address my research question: *How do mathematics teachers in Scottish schools conceptualise their actions with students on placement?*

The chapter begins by setting out the purpose of this research before attention turns to the methodology. It can be argued that Constructivist Grounded Theory [CGT] was the approach that most directly aligned to my research purposes and question. Although this research was largely informed by CGT, to categorise it straightforwardly as a CGT study would be inappropriate. As following sections will explain, it became apparent that a wider perspective on analysis would be apposite in the later stages of coding as the findings of the study were best encapsulated within an existing theoretical framework.

Attention then turns to an exposition of, and justification for, the general approach taken to validity. This is followed by an overview of the specific procedures employed to ensure the study's "credibility" (Glaser and Strauss, 1967; Charmaz, 2006, 2014), and the ways in which a reflexive position was adopted.

Moving on to the research design, the target group for this study is defined and the sampling strategy is justified. An account is given of the recruitment process and the backgrounds of the teachers who were recruited to this study are described. Attention next centres on providing a rationale for the approach taken to data collection. The pilot study, and in particular the way in which it informed the content and the approach to interviewing, is then described. This is followed by an exposition of the approach to interviewing, and a detailed description of the content and processes of the interviews.

Current conceptions of what transcription entails are considered and the process of transcription is set out.

Key to this study was ensuring that the research was carried out in an ethical, respectful and responsive manner. This section sets out the ethical considerations that underpinned the study and the specific steps taken to ensure that these considerations were put into practice.

The concluding section focusses upon the overall strategies for analysis. A detailed account of the different stages of coding the data is given that includes an outline of how the constant comparative method was employed and the role played by 'sensitising concepts' within the analysis. The move within the final stages of analysis to employing Wenger's (1998) Communities of Practice [CoP] framework is justified and explained.

Before proceeding to discuss methodology, it is important to remind the reader of the origins of the study alongside sketching out the research setting.

3-2 Origins of this Study

As previously stated, the purpose of this study was to explore secondary mathematics teachers' conceptions of working with students in their classroom. This arose from the question I had repeatedly asked since preparing to work with the first student in my classroom: *what do I do?* The answer given was usually a seemingly specific, but actually ambiguous, instruction such as '*watch them teach*' or '*give them advice*'. The research literature also did not give much in the way of direct guidance. Reviewing this literature revealed that the focus was on supervisors or university tutors and their specific responsibilities; and that the views of secondary school teachers *without* an assigned supervisory role had not been explored. Hence, by undertaking this study, I was looking to create the space for the teachers involved to share their conceptions on guiding students and then to generate insights that were grounded in these conceptions.

In planning this study, it was clear that the support offered to students from a wider network of teachers, beyond only the supervisor, has remained unexplored in preceding studies. This meant that the methodology needed to be data-guided rather than theory-guided to provide the necessary illumination of important themes embedded in teachers' conceptions. These methodological decisions were guided by: the research question; a determination to create a credible study with outcomes that contributed to filling the identified gap in knowledge; and my ontological assumptions and epistemological position that are set out in the following sections.

3-3 Interpretive Frameworks

This study had no pre-conceived answers or hypothesis, thus was "attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin and Lincoln, 2005, p.3). This required an approach that, initially at least, was dominated by inductive enquiry, where conceptions have to be clearly aligned with the ideas articulated by the participants. The frameworks that contribute to qualitative research can be categorised by the philosophical assumptions that underpin them; and the choice of a framework will most likely be influenced by the degree to which it is consonant with a researcher's own ontological and epistemological position (Creswell, 2013).

3-3.1 My Philosophical Position

When considering my philosophical position as I set out on this study, I realised it had evolved. During my undergraduate education, I was probably situated initially within positivism and later within post-positivism, finding security in applying the logical, cause-and-effect, binary elements typical of these positions. As I embarked on my teaching career, I discovered two approaches to learning that most influenced my practice. The first was the use of pupils' responses to build actively upon their existing knowledge and understanding thereby allowing new knowledge to be integrated into their

schemas (Skemp, 1987). The second was when I came to recognise that the power of argument and discussion when negotiating with others develops our understanding (Skemp, 1987). Furthermore, I think my long-term exposure to pupils developed within me a desire to *understand the complexity* that made teaching so interesting: the effects their backgrounds have had on them, the effects I had on them as their teacher, and the effects they had on me. All these influences in combination gradually shifted my philosophical position towards social constructivism. Social constructivism offers a portal into the constructed reality of those involved in negotiating a shared meaning and understanding (Jordan, Carlile and Stack, 2008). Applied to this study, social constructivism offers an opportunity to view the participants' world, not strictly through their eyes but by standing with them.

A number of methodologies could have been employed to frame this study. However, Phenomenography and Grounded Theory [GT] methods seemed to most align with the research question. In presenting an outline of Phenomenography and the family of GT methods, I explain and justify my decision to use Constructivist GT.

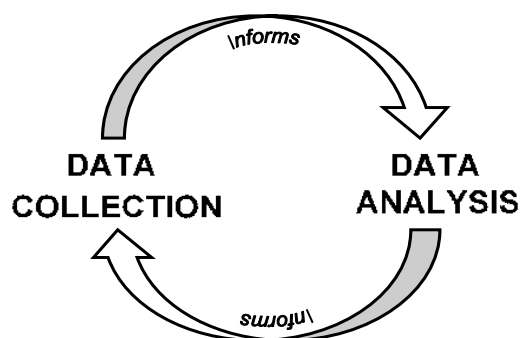
3-3.2 Phenomenography and Grounded Theory Methods

Phenomenography and GT are both concerned with the study of social phenomena, describing reality as it appears to, and is experienced by, those involved. However, they have a number of distinct differences that impact upon the research process.

Phenomenography emerged from the research and theorizing of the psychologist Ferenc Marton. Marton (1981, 1986) proposed that a phenomenon has a limited number of qualitatively different and logically interrelated ways of being experienced or understood by people collectively. The GT family of methods grew from the work of two sociologists, Barney Glaser and Anselm Strauss, as they sought a qualitative research method that enabled "the discovery of theory" (Glaser and Strauss, 1967, p.viii), that provided theoretical explanations of social processes.

To enable the collective story to be told, phenomenography requires that first data are gathered and are then treated in their entirety for analysis. By contrast, Glaser and Strauss (1967) described pathways for analysis as emerging from within the data, so introducing a process, termed ‘constant comparative methods’. This necessitates that data collection, analysis, and the creation of theory form a cyclical process, whereby each informs the other. To enable this to occur, the researcher must move recurrently between data collection and emerging analysis. While collection provides data for analysis, critical questioning during analysis provides concepts to refocus collection (Figure 3-1). It is this process that Glaser and Strauss (1967) claimed distinguished GT from other qualitative research methodologies.

Figure 3-1 Data Collection and Analysis



A further distinction is that phenomenography proposes that a researcher ‘brackets’ their expectations or opinions to prevent them influencing the research; this allows them to be a “neutral excavator of experiences” (Cousin, 2009, p.188). Glaser and Strauss (1967) made it clear that GT expects a researcher to be sensitive to, and make effective use of, their existing knowledge, be it from personal prior experience or literature or existing theory, as long as it is all treated as data for constant comparison.

Thus, using a methodology from the GT family would enable this study to begin with individual teachers’ conceptions of their actions with students, and to analyse systematically these conceptions to build towards theoretical categories construed from emergent patterns (Glaser and Strauss, 1967).

However, the GT family includes the 'traditional' GT of Glaser (1992), the 'evolved' GT of Strauss and Corbin (1990), and the 'constructivist' GT of Charmaz (2006, 2014). Like phenomenography, the traditional and evolved GTs offer an objectivist philosophy¹⁴. The belief in an external, single reality which can be opened up to the researcher contrasts with my relativist ontological position that accepts multiple realities. Constructivist GT, by contrast, does embrace such an ontological position.

3-3.3 Constructivist Grounded Theory

Fundamental to CGT is the priority given to the phenomenon under investigation alongside the shared experiences and influences between researcher, participants and data (Bryant and Charmaz, 2007; Charmaz, 2006, 2014). Participants are encouraged to share their experiences, thoughts, and feelings with the researcher who keeps an open mind. An open mind acknowledges the existence of conceptions but closely scrutinises their use and their effects. As such, the researcher focuses intensely upon what participants are saying, enabling their unconscious perceptions to develop into conscious ideas (Reichertz, 2014). Theoretical sensitivity demands that the researcher is sufficiently immersed in the data to interpret the participants' experiences.

Exploring participants' perceptions, understandings, and sense making necessitates that a researcher has a familiarity with, and acceptance in, the research context. While this familiarity assists with forming a shared meaning and interpretation within that context, the researcher must consider the manner in which their insider knowledge and experience influence their interpretations and any resulting theories, (section 3-4.2). In addition, it can also lead to ethical issues around power (Brooks, te Riele and Maguire, 2014), issues that are discussed later in section 3-8.2.

¹⁴ Although it should be noted that by the third edition of their book, Corbin's position has shifted away from postulating one reality and towards agreeing with aspects of constructivism.

I was determined to select a methodology that would align well with: my philosophical position; the focus and purpose of my study; and the open, interactive relationship that I wished to establish with my participants. CGT's key features aligned well with this research orientation and purpose. Accordingly, I chose it as the methodology to frame the design and execution of this study. As Glaser and Strauss (1967) and Charmaz (2006, 2014) are the key voices for GT and CGT respectively, it is their writings that I mostly used in designing and executing this study.

3-3.4 Open Mind and Sensitising Concepts

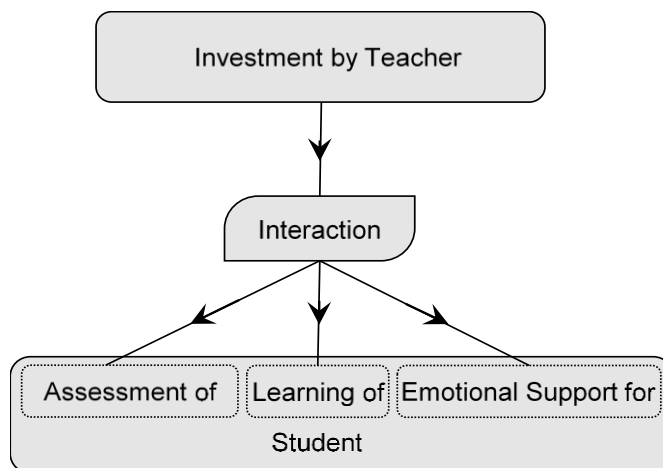
It would be naïve to believe that I could set aside my prior knowledge both from my wider reading and professional background. Instead, I explored it for "points of departure" (Charmaz, 2014, p.30), for sensitising concepts that might assist the study. In this section, I expose those concepts that shaped the initial direction of this study. As Dey (1993, p.63) states, "there is a difference between an open mind and an empty head".

Initially, my attention was upon the supervision of students on placement. Having spent a considerable amount of time exploring literature on this area, I questioned whether the focus of this research could be broadened to include all teachers in contact with a student on placement. Additionally, I became aware of concepts around context and culture, including differences between primary and secondary phases of education; school structures; subject status within the school; and subject philosophy. Having established the entry point for the study, I began to form the *sensitising concepts* that assisted with refining the research question and contributed points of reference for data collection (Charmaz, 2014).

The literature had identified the interactions between supervisor and student as significant: such interactions influenced the degree of emotional support offered to students, student learning, and student assessment. It also highlighted the importance of supervisors' investment in students, (see

Figure 3-2). These points of reference formed the sensitising concepts used in guiding the *initial* data collection to ensure it would have a clear focus.

Figure 3-2 Sensitising Concepts Informing Initial Data Collection



I will return to discuss both how these sensitising concepts were adapted or reconsidered, and how additional concepts appeared and were explored during the various stages of data analysis as a result of using constant comparisons.

Fundamental to all GT methods is the flexibility to follow the data, which requires a significant degree of openness throughout the study to enhance its credibility (Thornberg and Charmaz, 2014). Having justified my choice of methodology, the next section in this chapter addresses the issue of credibility.

3-4 Planning for Credibility

This section provides an account of how I view 'credibility' and the actions I took to ensure I produced a credible study. Exactly how these actions to achieve credibility were deployed is revealed within later sections of this chapter and in the Findings chapters.

In debating the terminology used by qualitative researchers when referring to the 'accuracy' of a study, Creswell (2013, pp.243-50) emphasises his preference for 'validation' while highlighting that other authors use alternative terms, such as 'trustworthiness' or 'credibility'. He concludes that the exact terminology used is down to researcher preference. I will use the term 'credibility' as this is the term employed by Charmaz (2014, p.337) in her account of CGT, and by the original authors of GT, Glaser and Strauss (1967, pp.223-35).

Credibility within a GT study, as presented by Glaser and Strauss (1967, p.224), is "based ... on the detailed elements of the actual strategies used for collecting, coding, analyzing, and presenting data when generating theory, and on the way in which people read the theory." By following this advice and the similar guidance provided by Charmaz (2014), the degree of credibility of this study will be made transparent to the reader through the detailed discussion of the careful consideration given to each phase of the research process. In the words of Seale (2003, p.177), this involves exposing "to a critical readership the judgements and methodological decisions made in the course of a research study." However, aside from this prescription to attend meticulously to the details of conducting a CGT study, Charmaz does not offer any clear, practical guidelines to ensure credibility.

For this study, it seemed important to consider credibility not as a straightforward unitary matter but as involving multiple dimensions. After close scrutiny of the qualitative research literature, the three dimensions – descriptive accuracy, interpretive validity, and theoretical validity – proposed by Maxwell (2012) appeared the most pertinent to my own research concerns and focus. The following paragraphs will display how these different dimensions are addressed in the thesis.

The first dimension, descriptive accuracy, is concerned with both the participants' accounts, and my rendering of these accounts, being factually correct, including careful attention to the use of quantifiers such as 'some', 'most', 'all'.

In using GT I was aiming to work principally from within participants' own accounts rather than imposing a framework of my own understanding, necessitating the use of Maxwell's (2012) second dimension, interpretive validity. Interpretive validity is concerned with "what these objects, events, and behaviors *mean* to the people engaged in and with them" (Maxwell, 2012, p.137).

In CGT research, data collection involves the joint construction of meaning and so concerns over interpretive accuracy began with an issue most pertinent for insider researchers, immediately checking my understanding with participants rather than making assumptions, (see section 3-4.2). Interpretive accuracy was also particularly important when reporting the findings. A considerable quantity of quotations and 'thick descriptions' (Geertz, 2007) are included to enable a reader to form their own judgements on my interpretations, including the reporting of contrasts and commonalities in participants' views (see Chapters 4, 5, and 6).

As part of my understanding of what interpretive validity entails, and consistent with my social constructivist orientation, I was concerned to consider individuals' statements against the backdrop of their immediate teaching contexts and what I knew of their personal and professional backgrounds. Where participants' statements could not be confidently captured by a single interpretation, I have set out differing ways in which these statements could be understood. Key to interpretive validity was my own self-awareness and considering my influence on the entire research process. These matters are discussed in the following section on reflexivity.

Maxwell's (2012, p.140) third category is that of theoretical validity which "refers to an account's validity as a *theory* of some phenomenon." In essence, it poses the question 'does the theory work?' It will be shown later in this chapter and particularly in the findings chapters that the conceptual lens of Communities of Practice (Wenger, 1998) offered a very good fit empirically and conceptually with the data. Wenger's (1998) lens enabled a very coherent account of the different areas that were of concern to the

teachers to be presented in a manner easily accessible to the reader, (see section 3-10.5). Importantly, this conclusion was only reached after carefully reviewing its applicability to the whole data set and the categories that had emerged from all stages of analysis, checking that there were no 'outliers' that could not be accommodated within this framework.

The section that follows reminds a reader of my background before discussing my understanding of the reflexive process.

3-4.1 Reflexivity

Particularly given that this study was located within an interpretivist framework, I need to account for my position as the researcher. My unique position of having worked as both a teacher and a university tutor means that I have a substantial depth of knowledge about the research field. It would be impossible to present myself as unencumbered by: preconceived thoughts about student placements and the impact placements can have upon students; or by knowledge of existing research literature. In addition to working in Initial Teacher Education [ITE], my own experiences as a student and probationary teacher many years before, and the immediate process of engaging with this study, will have shaped my interpretations concerning teachers' actions with students. Hence, ensuring the credibility of this study demanded that reflexivity became a critical aspect. This section considers both how I understood the nature of reflexivity and the steps I took to act in a reflexive manner.

As a fundamental axiom of CGT I, as the researcher, was not distinct from the object of the research. In other words, I was not simply gathering and composing a neutral report but was actively constructing data with participants, data which I further interrogated during analysis (Charmaz, 2014). Charmaz (2014, p.27) describes the researcher as "obligated to be reflexive about what we bring to the scene, what we see, and how we see it."

From the beginning of the study, reflexivity involved 'airing my conceptual baggage' (Kirby and McKenna, 1989, p.32), to publicly acknowledge and critically examine my position, beliefs, and assumptions concerning the research area and methodology. All this conceptual baggage could potentially have influenced the construction of knowledge, affecting research decisions from the phrasing of interview questions through to the analysis of data. Within this chapter, and indeed throughout the thesis as a whole, I have attempted to air my 'conceptual baggage', to give readers as explicit an account as possible of the concepts, experiences, and positions that have influenced my study to allow them to form their own judgements about the credibility of the research.

Reflexivity during the research process is referred to as "developing and maintaining methodological self-consciousness" (Charmaz, 2016, p.3). In practice, methodological self-consciousness required the recording of my thoughts at all points throughout the study. Charmaz (2014) uses the term 'memo' which she has described as a private conversation between the researcher and themselves as they interpret the data. These conversations can cover topics that may be observational, theoretical, methodological or personal (Richardson, 2003).

- Observational: My observations about an interview, the participant's behaviours during their interview, and where I may have used my insider knowledge.
- Theoretical: My thinking about what the data were saying, questioning them so as to open up possibilities of additional, and/or alternative interpretations.
- Methodological: The decisions I made about conducting the research, for example transcription decisions.
- Personal: My feelings and how these were changing, similar to keeping a diary, to assist with the tracking of 'self'.

In relation to reflexivity, writing memos opened to inspection not only my experience of conducting the study but also the decisions and interpretations

I made; how I related to participants and characterised them in text; and how I scrutinised my own perspectives and priorities that may have influenced the research (Charmaz, 2014).

Critical reflection enabled a degree of understanding of the impact my roles and identity had on the outcomes of this research and also the data collection. On this theme, Maxwell (2012, p.143) states:

The interview is itself a social situation, and inherently involves a relationship between the interviewer and the informant. Understanding the nature of that situation and relationship, how it affects what goes on in the interview, and how the informant's actions and views could differ in other situations, is crucial.

Maxwell's quotation highlights that my position within the field had implications for the credibility of the data collected. With this in mind, the next section will consider my position within the field.

3-4.2 Insider or Outsider?

To be recognised as an insider required a familiarity with, and acceptance in, the research field. My background could enable teachers to recognise me as a teacher and a university tutor, meaning I had both the cultural understanding and knowledge of the research context necessary to benefit from trusting relationships with colleagues (Jensen and Laurie, 2016).

Although my ability to understand their work was recognised, I did not work alongside the teachers in their departments. Instead I work with students in a university, thus I could also be described as an outsider, making my position 'murky'. My position, somewhere between 'insider' and 'outsider', conforms with Mercer's (2007) conclusion that viewing a researcher's position as either insider or outsider is inaccurate. Mercer (2007) argues that a researcher's position could be better understood as a continuum with multiple dimensions and that a researcher is relocated along the continuum as situations unfold.

Recognition of me as an insider by participants had advantages, such as easier access to potential participants, understanding of terminology,

awareness of the daily demands of teaching, quicker immersion in the data, and participants possibly being more inclined to share their insights (Kvale, 2007; Brooks, te Riele and Maguire, 2014). However, there are difficulties that cannot be ignored (Kvale, 2007; Brooks, te Riele and Maguire, 2014; BERA, 2018). I found the pilot study, discussed within section 3-4, was very helpful in designing coping strategies for dealing with the challenges of being an insider. In subsequent paragraphs, I will share three major difficulties and the strategies I adopted to be able to perform as an insider *and* outsider. These strategies were guided in part by Mercer's (2007) account of how she engaged with her research role.

The first difficulty, (which has been noted by Mercer (2007)), was that participants did not distinguish between my role as researcher from my role as university tutor. Unless this was overcome, I felt that it would disadvantage the research process. My researcher role, which required conversations to focus on participants reflecting on and considering why they do what they do with students, without fear of judgement, had as a prerequisite a significant level of trust. Yet, my university tutor role carried with it a set of power relations and expectations, which Kvale (2007) warned may moderate the honesty in participants' responses. I attempted to isolate my researcher role from my university tutor role by completing my professional dealings with the departments before appealing for participants for this study. However, within the interviews there were a few occasions where participants asked a direct question that focused on my knowledge of university expectations and procedures. In that situation, I had to weigh up the extent to which an 'official' response would influence the remaining interview against a dismissal of the question which could damage our relationship.

A second difficulty for an insider position is that participants could have formed preconceptions about my motives for including particular research topics (Mercer, 2007). These teachers' familiarity with the professional 'me' could result in them saying what they thought I wanted to hear. I tried to

counter this possibility by phrasing follow-up questions that started with: “Tell me about when...” or “Can you give me an example of...”, so as to draw more upon their experiences.

The possibility of participants sharing situations with which I professionally disagreed was a third difficulty to be prepared for. The necessity for honest disclosures means expressing empathy with the participant, not by imagining how I would react in the same situation they described but by showing I was listening carefully and thoughtfully to their experiences. These situations would also require the strict application of researcher ethics around confidentiality, (see section 3-7).

I was also primed to avoid referring to my own experiences when attempting to reciprocate trust. An insider referring to their own experiences could misdirect a participant, influencing both the interview content and interpretations thereafter (Mercer, 2007).

Lastly, my insider advantage of familiarity with the terminology teachers used enabled me to formulate questions in ways that would make sense to them (Kvale, 2007) but this could develop into a disadvantage when dealing with responses. I could not assume I understood everything they said during both data collection and analysis. Although within the interviews I was already an active collaborator involved with meaning-making, it remained essential to check my understanding and interpretations by asking: “Correct me if I’m wrong, but are you saying....?” During analysis, I needed to consider whether I dismissed statements too readily, perhaps considering them as obvious, yet overlooking the complexity from the participant’s perspective. For example, participants placed significant importance on students gaining experience of practice, which could be easy to dismiss as trivial or obvious. However, peeling off the layers and getting to the conceptions behind such statements produced interesting findings that could otherwise have been missed.

Furthermore, I examined critically my memo entries written during transcription and coding to unpack my use of insider knowledge. This

required that I questioned '*why*' I thought X or decided Y - *Was I using my insider knowledge? Were there alternative interpretations?* In some instances, this led to multiple possible interpretations of the data and overall to confidence that the data were being 'respected' *but* also questioned.

There was an unexpected advantage of my insider familiarity with these teachers. The various prior exchanges with potential participants as part of my professional role and the 'tea-making' conversation that began each interview enabled me to become familiar with participants' normal speech patterns which helped not only with transcribing, but also during the interviews.

3-4.3 Summary

Clearly, the requirement of reflexivity included examining the research process and myself. During the interviews, I potentially learnt about myself while I learnt from the participants.

My familiarity with the research field added the advantages of access to a wide range of teachers and knowing their behaviours allowed me to be an active collaborator during the interviews. To overcome the disadvantages of 'over familiarity', I repeatedly checked my interpretation of responses with the participants during their interview. Furthermore, the analysis and resultant findings were discussed regularly as part of the supervisory practice of a doctoral thesis.

I recognised that in addition to understanding the experiences of my participants and me as the researcher, it was necessary in the writing of the thesis to signal my presence in the research, to be "a visible narrator and co-participant in the text" (Hertz, 1996, p.7). My position as a co-participant in this study could be viewed as a problem and lead to questions about a bias in the findings of my research. In contrast, my ontological position, together with the extensive reflexive account of my professional background, should

provide information for a reader to help them to understand how I performed the role of researcher to shape and interpret the findings in this study.

Having set out my understanding and monitoring of my role in the research, I now turn to give an account of the research design, starting with the topics of the target group and sampling.

3-5 Target Group and Sampling

This section describes the target group, justifies the sampling strategy and number of participants before presenting the recruitment process. All of these factors required careful consideration both before, and during, the study.

The sample was drawn from the population of qualified mathematics teachers employed in Scottish schools. While GT does not involve identifying the sample at the beginning of the research (Glaser and Strauss, 1967), it was vital for this study that the teachers involved had recent experience of a student being in their department. A further criterion was to focus on the geographic area of the East of Scotland that comprises six education authorities and a selection of independent schools involved in a longstanding partnership to host students from the university in which this study was based. I was able to identify from university records which schools had recently hosted a mathematics student. To be able to address the research question, I had to seek out teachers where the student was given charge of the class, as opposed to confined to a purely observational role. In seeking out potential participants, I needed to communicate this requirement clearly.

Table 3-1 Target Group Data

Size of target group	97	across	13	Schools
		covering	4	Education authorities
		and	2	Independent schools

Having identified the target group, selecting a sample to involve in the research required consideration.

3-5.1 Sampling Strategy

For the pilot study, discussed in section 3-6, as distinct from the main study I was able to make use of convenience sampling. In doing so, individuals were selected in part based upon ease of access (Creswell, 2013; Ritchie, *et al.*, 2014; Jensen and Laurie, 2016). Although the credibility of any findings from the pilot might be questioned on the basis of the selection decisions, using convenience sampling was justifiable as the purpose of the pilot was to clarify my thinking on the research method and refine my interview skills (Creswell, 2013; Ritchie, *et al.*, 2014; Jensen and Laurie, 2016). However, convenience sampling was not as readily justifiable for the main study, especially as the target group was not 'hard to access'.

Nonetheless, my knowledge of the target group included assumptions developed from direct contact with the teachers, listening to students discussing their placements, and conversations with colleagues in school. I was concerned about the inappropriate impact my insider knowledge could have on influencing the selection of teachers in the main study.

Consequently, any sampling strategy requiring significant decision-making on my part had too much potential for subconscious bias (Kristensen and Ravn, 2015). To combat this, I decided to use self-selection by the target group. Self-selection empowered the teachers to decide if their knowledge and experience of the research area was appropriate for them to participate and if they had the time to participate.

Self-selection was not without difficulties, with the potential for particular groupings dominating (Kristensen and Ravn, 2015). First, I needed to motivate teachers to participate, (specifically that teachers who had worked with only a small number of students would still identify themselves as offering a significant contribution to the topic). Teachers with a number of students to reflect upon may feel confident to participate while teachers with

only one student to reflect upon may feel their experiences are too limited. Yet, these teachers may be more recently qualified and therefore more able to relate back to their own experiences as a student and link this to their actions. These, and other differences between individuals, could impact upon the data gathered (Kristensen and Ravn, 2015). This made the tone of the request for participants vital (see section 3-5.3).

Second, when approaching the target group, my status within the field may have made some teachers feel an obligation to contribute, challenging the legitimacy of informed consent (Brooks, te Riele and Maguire, 2014). To address both of these issues, I openly discussed the topic when visiting departments as a university tutor and followed these discussions up with a formal email invitation once placements were complete. It was important that the choice to reply lay with the individual to avoid any suggestion of pressurising teachers to participate. Third, my professional role may also have led teachers to make presumptions about my own opinions within the field, encouraging some to participate and others to avoid taking part (Kristensen and Ravn, 2015). This is unavoidable and I suspect an issue independent of the selection strategy used. However, it is possible that these difficulties may have been balanced with teachers experiencing feelings of appreciation and respect by receiving the invitation, which offered the potential of more open discussions during interviews (Kristensen and Ravn, 2015).

3-5.2 Background of Participants

Particularly given that this was a group of volunteers, it was essential to gain a clear sense of the participants' backgrounds. Accordingly, I gathered information about participants' professional experiences and background characteristics within a brief questionnaire. Kept to one page, the questionnaire was completed immediately before beginning the interview and thus was available later in the research process, (see Appendix B). The overview of the participants in the main study presented in Table 3-2

demonstrates the varied professional experience of those involved. (A fuller record of the background of participants is shown in Appendix C).

Table 3-2 Background of Participants

Participants		18	Across 10 Schools		
Gender	Male	9	covering 4 Education authorities and 1 Independent school		
	Female	9			
Years teaching	≤ 6 years	3	Regularity of hosting student in own classroom	Every time	5
	6 ≤ 12	9		Most times	9
	12 ≤ 18	1		Sometimes	3
	18+ years	5		First time	1
Leadership Position	Yes	4	Have experience as the supervisor	Yes	10
	No	14		No	8

Through the background data gathered in the questionnaire, I was able to ascertain the degree to which teachers involved in this study differed in their experiences and position. The overwhelming majority of the participants was on the main scale grade of 'teacher', with an average of 14 years of teaching experience. The number of schools these teachers had worked in over their careers to date ranged from one to six. Four of the teachers interviewed already had a master's qualification, and three were working towards this qualification, although not necessarily on aspects of education.

Just over half the participants had undertaken the formal role of supervisor at least once in the past. Two thirds of these teachers had also worked with students from other universities, and over three quarters had had a student in their class in at least the majority of times when a student or students were placed in their department. The diversity in participants' roles and experiences, demonstrated in Table 3-2, highlights that despite using self-

selection as the sampling method I did not in fact end up with a homogenous group of participants.

While the backgrounds of the participant teachers did not form criteria for recruitment, information on their backgrounds gave a useful layer of knowledge to the data analysis. Where distinct differences in views emerged during the analysis of the data, I examined whether these contrasts related to differences in participants' backgrounds and experiences.

From reviewing the supervisor literature, I was aware that attention needed to be given to the potential impact of school contexts. Accordingly, it appeared necessary to set out the characteristics of the schools from which the sample originated, as shown in Table 3-3. However, to preserve the anonymity of the teachers involved, I have chosen not to discuss any participant in relation to their school data as this might place individuals at risk of identification.

Table 3-3 School Data

Data drawn from Scottish Government Statistics ¹⁵			
School Category	State	Non-denominational	7
		Roman Catholic	2
	Independent	1	
Large urban areas (population ≥ 125,000)			7
Other urban (10,000 ≤ population < 125,000)			2
School Roll based on Pupil Census 2017 (Data not available for Independent schools)		pupils < 1000	2
		pupils > 1000	6
Proportion of pupils from minority ethnic groups (Data not available for Independent schools)		5 ≤ 10%	1
		10 ≤ 20%	4
		> 20%	3
Proportion of pupils who live in 20% most deprived datazones in Scotland ¹⁶ (Data not available for Independent schools)		0 ≤ 5%	1
		5 ≤ 10%	1
		15 ≤ 20%	2
		25 ≤ 30%	2
		40 ≤ 45%	1
Data is based on SIMD ¹⁷ 2016.			

3-5.3 Recruitment

The recruitment process in research is known to be unpredictable. Gaining access to potential recruitment sites was straightforward because of my accepted, regular appearance within relevant departments which also meant I had met potential recruits previously. Motivating busy teachers to participate

¹⁵ <https://www2.gov.scot/Topics/Statistics/Browse/School-Education/Datasets>

¹⁶ Only includes pupils whose addresses can be matched to a SIMD datazone.

¹⁷ The Scottish Index of Multiple Deprivation (SIMD) identifies small area concentrations of multiple deprivation across all of Scotland in a consistent way. It allows effective targeting of policies and funding where the aim is to wholly or partly tackle or take account of area concentrations of multiple deprivation. <https://www2.gov.scot/Topics/Statistics/SIMD>

was encouraged by a friendly face-to-face initial step comprising an informal conversation that aimed to: raise curiosity, build trust, answer questions, and be definite about the maximum time length for the interview (Jensen and Laurie, 2016). As discussed above, the target group consisted of:

- qualified mathematics teachers;
- teachers currently teaching in a secondary school located across the geographic area of the East of Scotland;
- teachers with recent experience of working with a student where the intention was that the student would teach the class.

Having brought the research to teachers' attention during informal conversations, I deliberately waited until after placements had ended before inviting participation to address potential tensions between my professional role and my researcher role. With the Head of Department's agreement to act as a 'mediator' (Kristensen and Ravn, 2015), I followed up these informal conversations with an email for circulation within the department inviting individuals to consider participation. This email explained the research and its purpose, with the choice to reply directly to me with a proposed convenient date, time, and location for the interview. Prior to their interview, participants each received a personalised email with a summary of the research and consent form for review.

I experienced no difficulty in recruiting teachers. This suggested that the target group considered the topic to be important and felt that they had something valuable to contribute (Kristensen and Ravn, 2015). Consistent with the practices of CGT, it would have been possible to widen the sample by engaging in a second round of recruitment if there had been questions arising and a need to refine concepts that could not be answered by the existing data set. In fact, the data collected from the 18 teachers proved to be wholly sufficient to address the research question.

Having identified that teachers' conceptions of their actions with students as an under-researched area, and that CGT would be employed, the strategy for

data collection and analysis will now be delineated within the next section, guided by the work of Charmaz (2014), (with supplementary advice from Glaser and Strauss (1967)). It needs to be noted, however, that while Charmaz (2014) and Glaser and Strauss (1967) give detailed advice on the processes of analysis, they offer only a bare outline of data collection.

3-6 General Strategy for Data Collection

The choice of method for data collection is directed by the research topic and question. To address the research question for this study required exploration of the thinking behind participants' actions. Accordingly, it was necessary to select in-depth interviews as the primary data collection method (Kvale, 2007; Morris, 2015). In-depth interviews have the advantage of creating a space for teachers to reflect in detail upon their experiences while articulating their thoughts with the assistance of probing questions from the interviewer (Charmaz, 2014; Morris, 2015). The adaptability of in-depth interviewing can also be seen to complement the flexible nature of CGT (Charmaz, 2001).

To maintain a focus on the research it was necessary to employ an interview guide. The use of an interview guide is not contradictory to GT research as it has the purpose of keeping the conversation on topic, so helps the researcher to complete the interview in the available time (Charmaz, 2014). Interviews of this form are considered to be semi-structured (Kvale, 2007).

However, a list of set questions did not appear compatible with the view of interviews as involving a joint construction of meaning. Focusing attention on the research participant, encouraging them to share what they consider important, may give the impression of interrogating them for information (Holstein and Gubrium, 2016). To avoid this impression, the interviews were planned to be somewhat conversational in form, although as the researcher, I provided discreet direction to the key areas I had previously identified (Charmaz, 2014; Morris, 2015).

Establishing the exact topic sets to explore would be a distinctly challenging process when conducting a study without a theoretical framework. To combat this, I drew on the sensitising concepts from the initial reviewing of literature in constructing the interview guide while maintaining flexibility to follow concepts that emerged from the interviews. The topic set I settled upon to explore within the interviews were:

- Why have a student in your classroom?
- In what ways were you prepared for the task? (Professional Development)
- Feelings upon meeting a student and as placement progresses.
- Responsibilities towards a student.
- The sorts of support provided to students.
- The sorts of relationship developed with students.
- Assessing/Judging student - informal/formal.

Having established that the primary data collection method was to be through semi-structured, in-depth interviews, and settled on the topic set to be included, the next decision revolved around the number of interviews with each participant.

While conceding that there are advantages to multiple follow-up interviews, Morris (2015) argues that these are only essential for longitudinal studies. Given that GT studies may extend over time and be open-ended, Charmaz (2001) maintains that multiple follow-up interviews open up opportunities to develop relationships alongside opportunities to test and improve ideas as they emerge from the analysis. The idea that 'multiple' may mean "with no clear notion of when the sequence will be terminated" (Glaser and Strauss, 1967, p.76) created a problem for encouraging busy teachers to participate. By contrast, to make clear their commitment was for a single interview would be advantageous. Charmaz (2001) offers a compromise that subsequent single interviews involve increasingly probing questions focused upon the ideas arising from the analysis. For example, while I continued to check that there was no professional development for working with students on offer to

the participants, I phased out discussing this topic in detail. This enabled time to ask more probing questions when discussing topics that had sparked interesting responses from participants.

While the research design has a large impact on the credibility of any interpretive study, so too did my skills in both the collection and analysis of data. Kvale (2007) has emphasised that the ability of the interviewer has a direct impact upon the quality of the interview and, as this research was my first use of CGT, I was aware of the need to practise my interviewing skills. With the explicit purpose of developing my understanding and honing my skills as a researcher, I conducted a pilot study.

Before turning to describe this pilot study and the interviews in the main study, it is necessary first to indicate how ethical considerations, and in particular interview ethics, were addressed in this study.

3-7 Ethical Considerations

The motivation behind the research was a desire to improve the situation for teachers surrounding their work with students on placement. My hope was that this study would not only open lines of communication between university tutors and teachers but contribute to developing mutual respect for the work each other undertakes to enable a more collegiate approach in redesigning ITE.

I am a self-funding doctoral student and, as such, this research was conducted without sponsorship or financial support from any organisation. Furthermore, participants in the study were neither offered nor given an incentive to participate beyond their own desire to share their insights into the study focus.

During my discussion of researching as an insider, I have highlighted the advantage of easier access to potential participants alongside the disadvantages of my role as university tutor, (see section 3-4.2). This only

heightened my awareness of the trust my participants placed in me; trusting anything disclosed would not affect their recent student, nor be discussed with either school or university management. Respecting the confidential nature of the interviews follows the revised Ethical Guidelines for Educational Research (BERA, 2011, 2018). Ethical approval by the University of Edinburgh was sought, and granted, before the pilot began.

3-7.1 Anonymity and Confidentiality

In line with standard good practice in research, guarantees concerning anonymity, confidentiality, and the right to withdraw at any time were made explicit in the invitation email, the consent form, and at the beginning of the interview process.

Participants were required to complete a single sided A4 questionnaire at the beginning of their interview. The questionnaire was designed with a tear-off slip so the teacher's identity could be stored separate to the questionnaire. At this point, a label was allocated to the teacher to link the two parts of the questionnaire, name the audio file, and serve as a pseudonym for transcription.

To ensure the anonymity of participants, these pseudonyms were used from the beginning of transcribing; and only I was aware of the origins of any specific data. There was to be no identification of individuals or schools at any stage of the research. Anonymity for individuals was further assisted by the significant number of schools and willing teachers within the geographic area of the research.

For confidentiality, the returned questionnaires were stored in a locked filing cabinet accessible only to me. The data they contained was collated into a spreadsheet linked to the pseudonyms of participants. Along with the electronic recordings and transcripts of interviews, these were stored on the university server, again labelled with the pseudonyms, and accessible only to me via my username and private password. Any paper copies of transcripts

being used during the analysis were stored alongside the questionnaires in a locked filing cabinet. Paper copies will be disposed of through confidential waste after the required time period has lapsed and all electronic files deleted.

3-7.2 Interview Ethics

From the experiences of the pilot interviews, it was clear that the teachers involved felt more relaxed and comfortable with the interview conducted within the private space of their classroom. As such, I indicated my flexibility to conduct interviews in a location chosen by the teacher. Even though this did result in travel costs and time, this was, I feel, returned in the quality of the data gathered and respectful of the teacher's own workload and generosity in giving their time. However, conducting the interviews in classrooms had a downside. My presence within the department after students had returned to university would naturally raise questions. While I was concerned about this potential loss of anonymity, I realised that some of the departments' teachers had already discussed their involvement in the research, encouraging each other to do so. While I benefitted, in that I had no difficulty in recruiting a sizable number of participants, Brooks, te Riele and Maguire (2014) have argued that those who participated being known to others limits confidentiality, even when the decision to have their involvement known lay with participants. However, this was balanced against the sizable number of participants decreasing the likelihood of identifying individuals within the write-up, especially as only limited school information was disclosed and could not be linked to any specific individual.

As part of the standard opening of each interview, the participant was reminded of the research aims and focus and that they were free to withdraw at any time or opt not to answer any specific question. They also, at this point, gave written consent to participation and recording. As advised by Brooks, te Riele and Maguire (2014), to be truly consistent with informed

consent, participants were encouraged to ask any questions for clarification at any point during the interview and in any future meetings we might have.

In CGT, rapport between researcher and participant to enable the required co-construction of meaning to be achieved raises ethical dilemmas. Brooks, Riele and Maguire (2014) are clear that data collection is influenced, either positively or negatively, by the position and identity of the researcher.

Positioned more on the inside, I was both familiar with the language of teachers and familiar to potential participants, which may have supported the construction of detailed data (Jensen and Laurie, 2016). At the same time, I had to be careful not to exploit my background knowledge of the politics of specific departments and of how students had perceived these departments, given that the focus was on the participants' own perceptions. This consideration contributed to my decision to use self-selection for the main study, and to remain mindful of my reactions during the interviews (see p.108). While my position held no direct or indirect control over the teachers, the potential of perceived power was not ignored.

To ensure a clear recording of interviews, I used both laptop software and a separate digital recorder. Admittedly, the teachers were generally nervous about being recorded. However, establishing that I had a clear policy for both the storage and use of the recording, alongside humour around my nervousness that the recordings would fail, enabled us both to relax. This I repeated throughout the study.

Now that the ethical grounding of the study has been set out, I turned to the data collection process, to the interviews.

3-8 Interviewing

3-8.1 Pilot Interviews

The pilot study involved four mathematics teachers located in four different schools, (see Table 3-4). I chose to employ convenience sampling from

within my target group for the pilot, focusing on easily accessible participants whom I have known personally for a number of years. I could be confident they would air any concerns they felt about the process and so improve the research and my skills to conduct the study.

Table 3-4 Pilot Teachers Data

Pilot Participants		4	across 4 schools		
			covering 1 Education authority and 1 Independent school		
Gender	Male	2	Leadership Position	Yes	2
	Female	2		No	2
Regularity of hosting student in own classroom	Every time	2	Years teaching	≤ 6 years	0
	Most times	2		6 ≤ 12	1
	Sometimes	0		12 ≤ 18	1
	First time	0		18+ years	2

As the purpose of the pilot was to develop my interviewing skills, I will now focus upon my experience of conducting these pilot interviews.

The interview guide was designed to prompt the flow of conversation and support me in encouraging, listening and learning from what the participant was sharing. However, I had constructed the guide to be actual questions, with formal terminology, which was not conducive to encouraging quality responses and resulted in jarred conversations. This was indicated in the pilot participant feedback, in the awkwardness I felt when asking these questions, and hearing this awkwardness when listening to the recordings. Accordingly, following the advice of Morris (2015) I re-examined the interview guide and converted these ‘formal’ questions into sets of topics that I could pursue in a more conversational manner. This adjustment resulted in a more comfortable third interview. Finally, for the fourth interview, key phrases inside the questions were underlined so as to ‘catch my eye’ to reduce the impulse to read questions like a script, (see Appendix D). The interview

conversations flowed more easily and felt much more natural after these adjustments. Casting the interview topics in broad terms allowed the participants to respond in ways which made sense to them. They thereby provided a direction to the conversation and key points that allowed a shared meaning of their practice to be constructed. This grounded the study.

Holstein and Gubrium (2016, p.74) also draw attention to the specific “speech activities” that an interviewer and participant engage in when asking and responding to questions. In taking ahead the interviews, I attempted to be alert to the form that answers were taking as well as their content. I tried to be aware of, and understand, each participant’s typical informal speech patterns so as not to form misunderstandings or disrupt their thinking by asking for clarification.

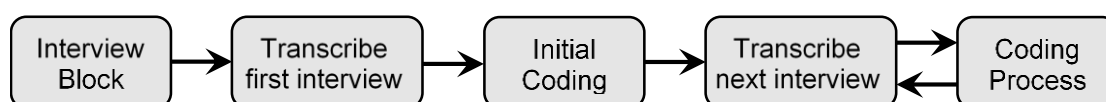
Overall, the pilot participants were positive about the topics explored, feeling that these covered a number of thought-provoking areas and expressed interest in the outcomes of the study.

3-8.2 Main Study Interviews

Interviewing for the main study started in January 2016, after the first placement for the academic year, followed by a block after the second placement in April 2016 and a final block after the third placement in June 2016. For ease of transcription and data integrity, the interviews were digitally recorded. I undertook the transcribing myself, (section 3-9), capturing my initial thoughts and impressions in memos to support reflections. From the pilot study, I was aware that the interviews would produce a significant amount of rich data to transcribe. Accordingly, I planned to conduct the interviews in a sequence that would allow for pauses for transcription and initial coding in which to consider the direction and focus of future interviews. In line with Roulston’s (2013) recommendation, I used the transcripts to monitor and continue the development of my interview technique.

However, I encountered three issues. First, I had underestimated the willingness of teachers to participate and, not wanting to refuse offers, I had to conduct a significant number of interviews before transcribing could begin. Second, transcribing the interviews took far longer than I had anticipated because of the care taken to complete this task accurately. Third, unplanned interruptions to my studies prevented transcription and coding to progress sufficiently to explicitly inform the direction of later interviews. I did not want to lose the interest I had generated amongst the teachers, so I felt it would be more appropriate to proceed. As a result, the actual cycle I ended up following is shown in Figure 3-3.

Figure 3-3 Data Collection and Analysis Cycle



The statistics on the length of the interviews are shown in Table 3-5. Each interview was conducted in the teacher's choice of location, mostly in their classroom during the school day but during non-contact time. All times are in minutes.

Table 3-5 Interview Statistics

N	Shortest	Mean	Median	Longest
18	30	42	39	66

When designing this study, it was clear that to achieve the interviews' explorative purpose I would need to embrace an active role, by being neither directive nor distant but treating each interview as a social encounter, collaborating with the participant to construct knowledge. To be viewed as an 'active collaborator', I followed Whyte's (1979, p.65) direction that I "build on mutually supportive relationships with subjects". My background as a teacher was invaluable in assisting with this.

Recognising that adopting an insider identity assists with interview conversations (Charmaz, 2014; Morris, 2015), I adapted how I presented myself to reinforce my teacher identity. I drew heavily upon the behaviours of a teacher while suppressing the behaviours of a university tutor. Partaking in the teacher ritual of making a cup of tea and having a biscuit established a rapport that continued into the interview itself.

The tea ritual sounds trivial to an outsider but, in the world of mathematics teachers, being offered a drink is a welcoming gesture while helping to make it is an indication of acceptance. Considered an important ritual, the time was used to develop a relaxed, informal atmosphere and a rapport that encouraged openness and the reflective conversation required for an effective interview (Charmaz, 2014; Morris, 2015).

Part of the 'tea making' conversations included reiterating the research purpose, how the data were to be used, answering any questions, following ethical guidelines of gaining written consent, and reminding the teacher they could withdraw at any stage. With the teacher moving to complete their questionnaire, I set up my dictaphone, and laptop as a backup, where I laughed at my own worries around an equipment failure. The intention was that any apprehension on the part of the teacher about being recorded would be deflected onto the interviewer. In the interest of anonymity, I allocated a label to each interview. This label allowed me to tag each individual's contributions to this thesis.

Recording the interviews enabled my focus to be upon the interview conversation so I could probe deeper at the time and ensure I had a clear understanding of the meaning that participants were conveying in particular statements. This was particularly important as I was conducting a single interview with each participant. (The logic behind single interviews was discussed previously in section 3-6.)

Although Morris (2015) depicts the research participant as controlling the course of the conversation, Holstein and Gubrium (2016) point out that the

content, form, and direction of the interview emerge from the interaction between the interviewer and participant. To explore teachers' conceptions of their interactions with students, the interviews had to enable participants to share their existing practice without fear of judgement while simultaneously avoiding adding my own stories. I found that employing empathy, smiling and nodding regardless of my own thoughts, and using 'teacher humour' gave the teachers interviewed confidence to be open about their experiences, thereby encouraging a depth of dialogue and reflection (Ashworth and Lucas, 2000). This reflection supported the construction of knowledge with the result that the participant might also learn from the interview experience (Kvale, 2007). There were instances within the interviews where it was clear that the experience of sharing and discussing their actions with students appeared to result in participants reflecting and learning further (see p.177).

I also followed the advice of Schön (1983, pp.8-9): "I begin with the assumption that competent practitioners usually know more than they can say. They exhibit a kind of knowing-in-practice, most of which is tacit..." In asking participants to reflect upon their own experiences in working with students, I assumed that they knew more than they initially said. I consistently shifted from open-ended general questions, such as "tell me about how you see your professional relationship with the student", to more probing follow-up questions based upon the participant's response, such as:

- Can you tell me a bit more about that?
- Could you explain further?
- Could you give me an example?
- Why is that important to you?

To avoid possible misinterpretations, I also constantly checked my understanding by using phrases such as: "Have I got this right?", "Is this what you mean?" within the interviews. This assisted with establishing credibility, specifically interpretive validity, (see section 3-4). These questions reflected my active role as the researcher. I needed to develop a mutual understanding between each participant and me (Charmaz, 2006, 2014) to

support the participant to reflect more deeply and ensure I had interpreted their verbalised conceptions appropriately.

Because the interviews were digitally recorded, I had to convert their speech into text for analysis, which is not the simple task it may appear to be. The next section in this chapter considers the process of transcription.

3-9 Transcription

This section provides an account of current conceptions of the transcription process and the approach taken to transcription in this study. CGT requires “full interview transcriptions” (Charmaz, 2014, p.136). Even within full transcription, the transcription style ranges from the two extremes of depicting, as far as possible, an individual’s true-to-life natural speech, called “naturalism”, to where the speech is ‘cleaned up’ to a written form, called “denaturalism” (Oliver, Sercich and Mason, 2005, p.1273). Mishler (2003, pp.300-1) warns that the choice of form has “serious implications for how we might understand the discourse”; and describes transcription as “not merely a technical procedure but an interpretive practice.”

The degree to which a transcript is “denaturalised” depends on the research aims, the target audience, and the analysis method (Silverman, 2006; Kvale, 2007; Roulston, 2013). While discourse or conversation analysis require “naturalist” transcription, Oliver, Sercich and Mason (2005, p.1277) claim that research focused upon “the meanings and perceptions created and shared during a conversation” such as GT tolerates a high degree of “denaturalism” in transcription. Although Charmaz (2014) makes no explicit recommendations for transcription style, as the purpose of this study focused upon teachers’ conceptions and the analysis focused upon the meanings and understandings co-constructed during the interview, a denaturalised style appeared to be acceptable.

In dealing with issues around pronunciation or the use of dialect terms, I was careful to employ standard spelling and punctuation but otherwise did not

change the vocabulary participants used. The recordings also picked up utterances termed as 'vocalisations' by Oliver, Sercich and Mason (2005). These were involuntary vocalisations and response tokens, sounds used in everyday talk (Roulston, 2013). Non-verbal signals, such as facial expressions and body language, which appeared to carry nuances in meaning, were noted in the observational memos.

The first pilot was transcribed to include 'everything', which I quickly discovered to be distracting during analysis. Encouraged by Robson and McCartan's (2016) assertion that denaturalised transcripts are not irreversible, I decided to omit involuntary vocalisations, such as coughing, and tokens that were fillers such as 'like' or continuers such as 'mm' where it was clear that such sounds did not contribute meaning to the focus of my study. In contrast, some vocalisations, mostly emotional cues such as heavy sighing or laughing, gave additional meaning to statements, so were included in the transcript. In addition, I chose to use square brackets to indicate my insertion of a word for clarity and I used a star (*) before and after a word or phrase to indicate where a speaker had given extra emphasis.

While accuracy and overall credibility can be supported by another person checking transcripts (Silverman, 2006), this can raise issues of confidentiality with a single researcher study such as this one. The necessity for a high degree of accuracy meant transcribing was a time-consuming process but, (as Bryman (2001) and Robson and McCartan (2016) have observed), undertaking the transcriptions myself presented great benefits. The repeated listening to the recordings, alongside reading the transcripts to check for accuracy, assisted with immersion in the data and so initiated the analysis process (Morris, 2015; Robson and McCartan, 2016).

It has been noted in a preceding paragraph that Mishler (2003) considers the transcription process actually forms part of the interpretive procedure. In a similar vein, Sandelowski has described transcribed data as "partly cooked" (Sandelowski, 1994, p.312). Indeed, I tended to write memos as thoughts surfaced in the course of transcribing each interview. These thoughts were

around the tone of voice, what I thought of the involuntary vocalisations, ideas that surfaced, and questions that arose. Forming a record of the decisions I made when transcribing, these memos can therefore be viewed as contributing to reflexive practice (Mishler, 2003).

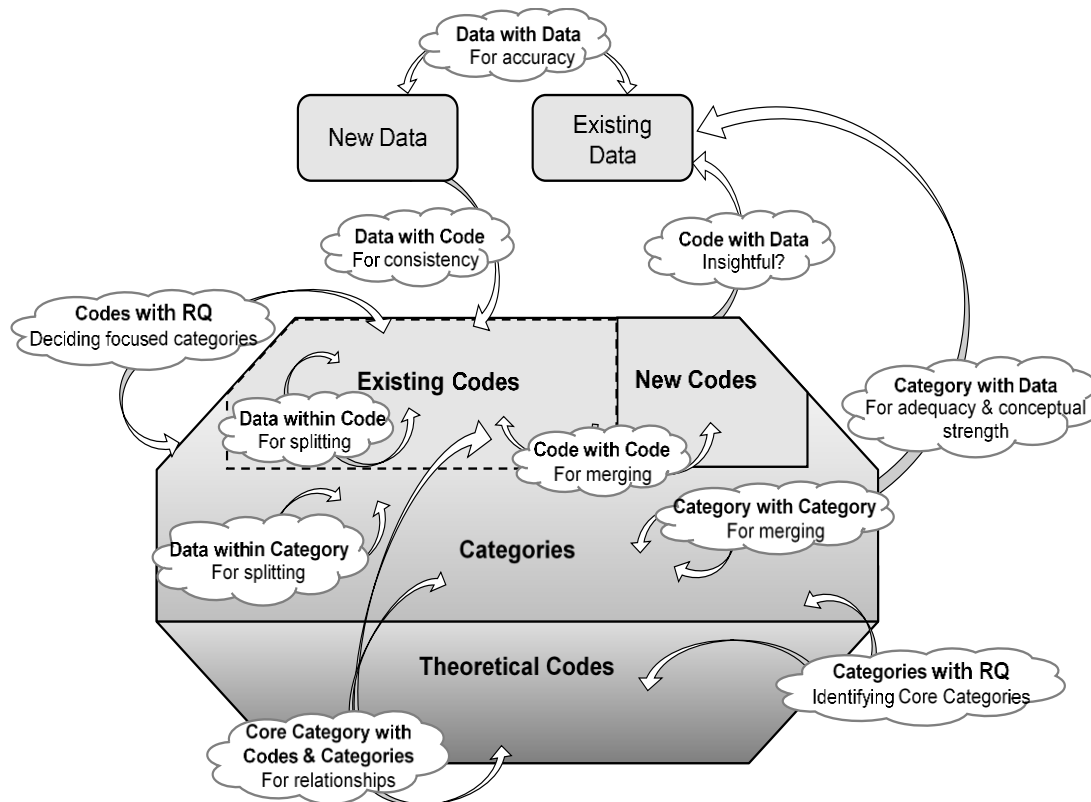
In line with Silverman's (2006, p.236) observation, there came a point where I had to accept there is no such thing as a perfect transcript and move to begin coding. The following section on data analysis attempts to provide a balance between providing a clear, focused overview of the intricate processes of analysis, while at the same time providing sufficient illustration of these processes.

3-10 Data Analysis

Having explained how data were to be collected and set out the transcription procedure, this section moves on to discuss central aspects of data analysis. The coding processes required for a GT study will be set out, with illustrations from my experiences of implementing these processes, first with the pilot study followed by the main study. In discussing the final coding stage of the main study, the decision to utilise the conceptual framework of Communities of Practice (Wenger, 1998) is justified.

Generally within qualitative analysis, the coding process is described as a "concrete activity of labelling data, which gets the data analysis under way, and which continues throughout the analysis" (Bryman, 2001; Punch and Oancea, 2014, p.228). However, GT has one specific requirement for data analysis; that the researcher employs the constant comparison methods specially devised by Glaser and Strauss (1967). Comparisons occur in each level of coding, to assist with the analysis and immersion of the researcher in the data, preventing early generalisation occurring and limiting the analysis process (Charmaz, 2014). I have attempted to capture the various forms of comparisons involved in GT in Figure 3-4.

Figure 3-4 Constant Comparisons and Coding



Specifically for CGT analysis, Charmaz (2006, 2014) refers to three stages: ‘initial’, ‘focused’, and ‘theoretical’. The coding process may seem to imply that initial coding is completed and focused coding begins in a linear fashion. However, Punch and Oancea (2014, p. 232) considered these levels to be “conceptually distinct but not necessarily sequential...rather, they are likely to be overlapping and done concurrently”, highlighting the necessary fluidity between the levels to ensure codes and categories emerge from the data (Glaser and Strauss, 1967; Charmaz, 2014).

The following sections will discuss each level of the coding process in turn. Initial coding is illustrated using examples from the pilot study while the interplay between initial and focused coding is illustrated using the main study. Since this study was exploratory in nature, these processes are

presented in detail, offering an understanding of the coding decisions and how the findings evolved.

3-10.1 Initial Coding

Initial coding, more aptly described in CGT as interrogation of data, begins with examining and questioning, not only what was described but also what the data segment means, to expose possible directions to take (Charmaz, 2014).

Although the pilot data was not included in the main study data set, analysing them provided practice in initial coding and assisted my understanding of the processes described in the literature.

Analysis began with the transcribing of the first pilot interview, and concentrated on interpreting the participant's reported actions and meaning as opposed to linking with a pre-defined theoretical framework. While sensitising concepts were useful in forming the interview guide (Section 3-7 p. 108), I set these concepts aside for initial coding so as to be open to new possibilities as it was by following the data that the codes emerged (Charmaz, 2014).

Initial coding involves dissecting the data, either word-by-word, line-by-line, or incident-by-incident (Charmaz, 2014). I experimented with each and found that the pilot data did not fit neatly into any of these recommendations. My experience matched the advice given by Robson and McCartan (2016), of chopping the data into discrete chunks, the size of which varies to suit the code.

For these initial codes, Charmaz promotes *process* and *in vivo* methods. The *process* method uses gerunds to label either physical or conceptual actions in the data (Saldña, 2009), which Charmaz (2015) felt assisted in establishing the connection between data segments in the code and the code's underlying significance. By contrast, the *in vivo* method requires the use of the participants' own language for the labels (Saldña, 2009) and can

assist in keeping the code close to the data (Charmaz, 2014). Table 3-6 illustrates an example of line-by-line coding from the first pilot interview.

Table 3-6 Pilot Interview: Line-by-line coding

Raw data	Examples of codes
I think you need to talk to them quite a bit, I think you need to talk to them, and you need them to talk very much. They are there as an equal. They are there as a colleague, so there needs to be a very open dialogue, that I think it's, it's a bit like having pupils. You need to monitor what they are doing so you need to be seeing have they finished their homework, have they done their lesson plan, are they confident about what they're going to do, is there anything that's worrying. You know, you're drawing everything out and you're having that dialogue and you are very much of an open door, and you've got time to talk to them. And if you can build up that rapport it's, again, it's going back to the child analogy, you will get a good result out of it in the end. And again, it's just providing support so on a day-to-day is making sure that they are ready for the lesson, if they have questions you are there to support, you're prepared to give them the feedback in a timely fashion. Both sort of verbal and some sort of written communication too. And that you are ready for the next steps, and to take them onto that next bit, whether that be more intervention, or withdrawing your support and the amount that you are telling them to do.	<p>Communicating Lots of talking Relationship with student Colleague Open dialogue Similar to pupils Monitoring Checking Judging student Emotions- confident, worrying Getting information from student</p> <p>Having conversation Making time Building rapport Similar to pupils</p> <p>Providing support Answering questions</p> <p>Prepared to give feedback</p> <p>Different forms of feedback Using professional judgement Next steps Intervening Withdrawing support Instructing</p>

Initial coding of the first pilot interview resulted in a large number of codes. Comparisons after the addition of further pilot interviews resulted in the merger of some codes since, on closer inspection, they were the same filter for the data. For example:

- '*Cultivating development of student*' merged with '*helping student to develop*', or
- '*Connecting with student*' merged with '*building rapport with student*', '*relationship with student*', and '*friendly*'.

I believe this overlap resulted from my dominant use of *in vivo* coding, as the teachers' language varied greatly. In addition, due to the complexity of the data, I quickly discovered the need to also embrace simultaneous coding (Saldāna, 2009). Simultaneous coding does not interfere with either *process* and *in vivo* coding methods as it is about accepting the need for multiple categories for successive pieces of data (Saldāna, 2009). Bryman (2001, p. 398) emphasises that "any one item or slice of data can and often should be coded in more than one way." Bearing in mind Saldāna's (2009) words of caution, I remained alert to the fact that used excessively, simultaneous coding could indicate an indecisiveness on my part or lack of focus that I should remain alert to. In moving to initial coding of the main study, I concentrated on *process* coding while recognising that simultaneous coding was often required.

The coding of each pilot interview was initially attempted with pencil and paper, as Charmaz (2000) advised this would maximise my immersion in the data. However, in moving to the main study, as the amount of data and codes were greater, it was necessary to use Nvivo 11, qualitative analysis software, to assist with data management. The software not only enabled straightforward creation, and later editing, of codes and categories but also the tracking of code and category properties, and the production and storing of memos. Further advantages of the analysis software included: the easy retrieval, whenever required, of transcripts with recordings or specific coded text; and the creation and archiving of copies of the project. It enabled the tracking of progress or returning to earlier points in the analysis, which encouraged experimentation with the coding.

Initial coding of the main study occurred over a significant time period due to the degree of immersion in, and active exploration of, the richness of the data to enable confident identification of patterns. Adding to this were my fear of: inflicting my own assumptions about teachers' conceptions; or imposing the sensitising concepts from earlier literature; or reaching conclusions too early. However, an advantage of an extended initial coding period was my

absorption in the data and taking time to learn and explore the power of the Nvivo software.

Memos recorded definitions that encompassed the ideas that created each code. As coding is about interpretation of data (Charmaz, 2014), these theoretical notes were important to keep track of how I was interpreting the data and assisted with comparisons. For example,

(+ Interview 5) Purpose: Theoretical – comparing codes

Giving control to student and *Exposing a student to reality* noticeably share data segments: Are these the same?

Giving control to student – data segments point to this as a positive action, sign of student progressing, and it does result in student having a better idea of what it's like as a teacher, so reality is a consequence, but not the only one. Sometimes it develops a student, gives them confidence, allows for assessing.

Exposing student to reality – data segments point to this as a purpose behind a specific action or overall, bigger picture. It can be a positive, to prepare student for next steps, or a negative, to make student aware their practice is not up to standard.

Conclusion: These two codes are related but not the same. They are each also related to some other specific codes. Perhaps they form a group? Ponder this!

Later, I did decide that these two codes did in fact form a category with some other codes, which I called *Guidance*.

Comparisons of codes were necessary whenever new codes appeared. I not only compared new codes with existing codes, but also investigated if these new codes could be applied to previous interviews. This constant checking back and forth enabled the codes to evolve, with adjustment, revision, or merger, all as part of constant comparisons (Figure 3-4). The natural outcome, in accordance with Charmaz (2014), was the identification of possible ideas to explore in the analysis and in the data collection by re-directing the interview guide. However, due to unavoidable disruptions in the

timeline of my research, re-directing the interview guide was not possible. Nonetheless, the memos made immediately after each interview had recorded a general impression of which topics sparked the most interesting reactions, so I used this information to prioritise topics in subsequent interviews.

Through comparing data within each code, I could feel secure with how I was coding while also appreciating the need for more in-depth consideration of code names to represent my conceptual thinking as opposed to simply describing those data segments. These names sought to clarify the conceptual grounding of these data segments. I found that through repeatedly reading the data within a code, I began to capture the essence of the conceptual framing in its name. My uncertainty over code names was not unusual and, according to Holton (2007), would diminish as the analysis progressed. This proved to be the case.

At times, I felt like I was drowning in data and codes but, gradually, I was swimming amongst them and realised I was becoming sensitive to themes across the data. Aware of initially hidden patterns and reflecting upon emerging categories was evidence that coding was beginning to include the next level. There was not a sharply defined border between this phase and the next focused coding.

3-10.2 Focused Coding

Following on from initial coding, focused coding involves “decisions about which initial codes make the most analytical sense” to the researcher; decisions based on how they are interpreting and understanding the data (Charmaz, 2014, p.138). The analysis continues, focused on these codes but alert to potential new initial codes. Focused codes are selected to categorise the data in terms of *conceptual similarity* and continue to rely on constant comparison (Charmaz, 2014). Focus coding necessitated that I listened very closely to the data and initial codes so I could select those that focused upon answering the research question and I could appreciate the connections

between them. I returned to the data segments to explore more closely the connections or contrasts between them.

Revealed during focused coding were distinctly different conceptions that informed participants' actions. After many false starts, I was able to be satisfied that the resultant categories exposed the critical connections in participants' concepts and were very much grounded in specific data slices. The first of these categories centred upon the participants considering students' suitability and ability to join the profession. The second category revolved around offering experiences to students, while a third category arose as I became aware of the '*non-emergence*' of matters that had significance for this study. Accordingly, some codes captured participants' avoidance, lack of interest in, or skirting around certain topics and issues I viewed as salient for this study. A potential weakness of simply applying GT methods as a straightforward process to analyse a data set is the danger of being so immersed in the data that I would be blind to what was *not* in the data.

Charmaz's description of initial and focused coding instilled the confidence to accept multiple times that some directions I had followed through focused coding were unproductive, requiring a return to initial coding.

3-10.3 Coding Saga

Before discussing the final coding level, I shall give a detailed demonstration of how I coded the data and the decisions I made during analysis, concentrating on the evolution to include focused coding.

With the addition of the fourth interview, not only was the code list unwieldy and causing concern, but I felt that I was imposing categories too early. I reviewed the codes carefully, considering their potential usefulness for analysis, concluding they were too descriptive to be useful (Charmaz, 2015). It was clear from this review that a fresh approach was required. Here, Holton (2007, p.266) provided reassuring advice in the statement that: "the method

is best learned by cycling through the various procedures, learning from each attempt and developing clarity and confidence in their application.”

After some re-reading of coding strategies in qualitative research, I returned to the first two transcripts and started afresh, keeping the coding “simple, direct and spontaneous” (Charmaz, 2014, p.113). After the inclusion of interview 4, the codes appeared to fall into six broad categories, (shown in Table 3-7), related to the viewpoint from which the teachers appeared to be considering matters when framing their response. The decision to shift to perspectives enabled the data to be broken into discrete chunks.

Table 3-7 Categories after 4 Interviews

Category	Description
Department Perspective	Interviewee is talking from the perspective of the department as a whole.
Own Perspective	Interviewee is talking about themselves, about their own development, needs, or skills.
Pupil Perspective	Interviewee is talking from the perspective of pupil(s).
Student Perspective	Interviewee is talking from the perspective of a student, drawing from their own time as a student
Supporter Perspective	Interviewee is talking from the perspective of directing the student.
Teacher Perspective	Interviewee is talking from the perspective of a teacher, about teaching in general, being a teacher.

Splitting data into chunks can be useful, and indeed the chunks formed around these perspectives did expose the complexity in participants’ thinking, but their size was just too big. Taking each one in turn, I investigated within them to form codes which I then compared across the chunks. I then turned to code the fifth and sixth interviews to explore these codes with new data. I would describe the categories in Table 3-7 as a staging post towards the formation of the more focused codes set out in Table 3-8.

Table 3-8 Categories after 6 Interviews

Category	Description: Teacher considering	Codes included, for example:
About	Information about students generally.	Background; Key flags; Presumptions; Expectations.
Skills	Skills drawn upon when working with the student.	Organised; Being (un)fair; Confidence; Giving feedback.
Student	Appreciating the situation for the student.	Consistency; Gaining knowledge; Power dynamics; Comparing students; Relationship; Variations between teachers.
Teacher	Confidence and competence in own practice as a teacher.	Learning from student; Pressures on teachers; Protecting pupils; Reflecting on own practice.
Guidance	Their advice about specific items to students. The degree of advice varies.	Advising; Developing; Exposing student to reality; Giving control to student; Giving instruction & direction; Modelling; Supporting; Sharing knowledge & experience.

During the subsequent review of the categories, I sorted the codes within them by the number of interviews involved, followed by the number of data segments assigned to that code. However, I quickly became aware that a high number of data segments within a singular interview was due to the participant returning to a point, realising that the number of data segments was not informative and indeed could be misleading. This also highlighted an issue with using software packages for analysis. As Dey (1993) has warned, it is too easy to be distracted by what the software can indicate without

considering the purpose and usefulness of knowing. The resultant categories from these six interviews are shown in Table 3-8.

However, again I struggled to see relevance when reviewing the categories and their codes. The aim of this study was to explore teacher's conceptions of their actions with students in the private space of their classroom. This is not simply '*what they do*', but also '*why they do it*'; as the researcher, I needed to focus additionally on the meaning behind '*what they do*' descriptions. Charmaz (2014, p.113) has emphasised the need to "define what is happening in the data and begin to grapple with what it means", to interpret as opposed to describe the data. An unplanned interruption to data analysis also resulted in my losing the required immersion to follow my own thinking.

On my return, realising I was not able to just pick up where I had left off, I chose to code two interviews again with fresh eyes. Having done this, I felt confident I was now definitely more focused on looking at the meaning behind the teachers' actions. I constantly returned to the full transcripts, focused upon considering '*why*' the teachers described what they did. This included the "dual process" (Mishler, 2003, p.317) of reviewing full transcripts alongside listening to the recordings to be sure of my interpretations. Mishler (2003, p.318) felt this to be prudent to aid "discovery of features and patterns in the talk that were not evident either on first hearing, or on later re-hearings not specifically intended to produce a transcript".

By regularly pausing the coding process to allow for comparisons, some codes were identified as requiring deeper consideration; for example, the two codes *Judging* and *Advising Student*. Taking each data segment in turn, the conceptions behind the actions were considered, resulting in these codes evolving into those shown in Table 3-9.

Table 3-9 Codes Judging and Advising Student

Code	With regards to	Description
<i>Critiquing</i>	student practice in classroom.	Identifying strengths and areas to develop.
<i>Directing</i>	the student to improve their practice in some way	Telling, sounds as if only 1 option given than multiple suggestions for a student to decide.
<i>Instrumental</i>	in terms of developing student practice.	A 'recipe approach' to teaching
<i>Relational</i>	in terms of developing understanding towards student practice.	A 'flexible approach' to teaching.
<i>Constructive</i>	advice for student.	Clear direction given with an idea why, indications of thinking behind their advice
<i>Judgmental</i>	of student.	Quick to judge, yes or no, clear cut.
<i>Testing</i>	the student	Checking what the student knows.

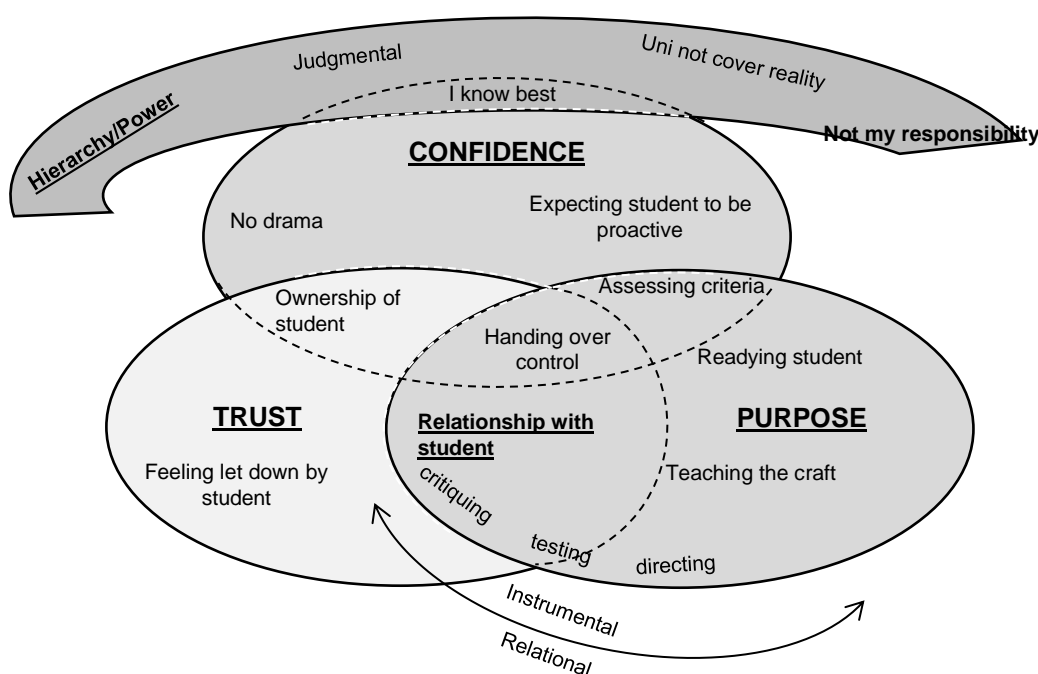
The constant comparative processes shown in Figure 3-4 were employed continuously; this led to significant or prominent codes being flagged for possible analytical routes to explore.

As analysis progressed, I became aware that these teachers' conceptions could not be separated neatly into categories; in truth, they formed what I described in a memo as 'a spaghetti junction of conceptions'. At this point, worried that I was just going round in circles with coding, I decided to attempt an exercise suggested by Clarke (2005, p.83) to overcome "analytic paralysis". This involved creating a working version of a code map (see Appendix E) and taking each code in turn to consider its relationship with the other codes. Through creating this 'messy map', I was able to consider a particular code, *Purpose of placement*, which had irritated me. Teachers' conceptions appeared to centre on the purpose of a placement related to the student gaining knowledge from the experience, either relationally or

instrumentally, and preparing the student for the future. I realised it was more than a code; instead, it was a conceptual ribbon linking codes together. The mapping activity helped to open my eyes to look incisively at the codes and possible emerging relationships across them. In his 1999 book, Dey (1999, p.105) proposes that code “strings can also be folded, looped, and otherwise manipulated in order to create the conceptual “webs” or “nets” through which to develop our analysis”, a proposal I found very useful.

Additional emerging categories included: *Hierarchy/Power*; *Relationship with student*; *Confidence*; and *Trust*. Consideration of these categories resulted in the creation of Figure 3-5.

Figure 3-5 Categories and Their Codes

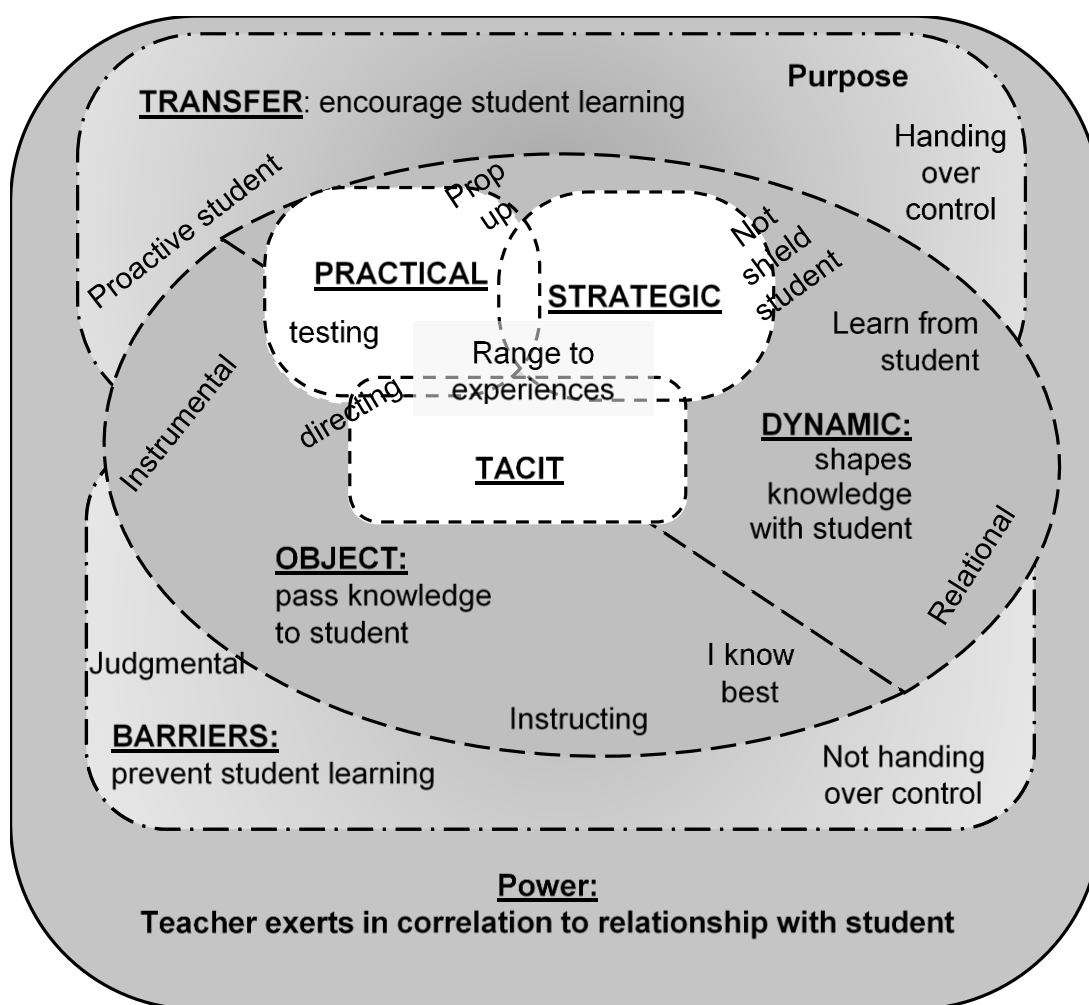


After repeated reconsideration and self-doubt, thinking I was not coding properly, I came to realise this tangled mess was actually reflecting the complexity of the situation with which these teachers were dealing. The creation of Figure 3-5 had crystallised my thinking a great deal. To interrogate the data properly so as to establish the meanings that might be

associated with particular actions, it became a matter of asking ‘*what is the teacher thinking when they say ...*’.

While Figure 3-5 illustrates a snapshot of my thinking at this particular point, this was merely a staging post towards more developed thinking. As I concentrated upon exploring the similarities and the differences between these categories and codes, I found an underlying, multiple layered logic behind the participants’ actions related to knowledge, which is illustrated in Figure 3-6.

Figure 3-6 The Layers to Knowledge Categories



It was at this point that I believed I had found a strong path to follow in exploring the participants' conceptions within the data.

Emerging from the data were participants' conceptions of the knowledge of teaching that informed their actions. I was becoming aware of the significance the teachers placed on the knowledge that either the student arrives with, or gains over the placement, and the teachers' noticeable interest in observing the student in action. After further reflection, these slices were coded into different forms of knowledge; forms of knowledge that were key to the participants' conceptions. This did require further reading on my part to develop my own understanding of these forms to enable their identification and so that I could feel confident to probe them further.

Table 3-10 Categories Involving Knowledge

Category	Description
Knowledge Transfer	Processes that encourage student learning.
Knowledge as Object	Processes that pass knowledge to student.
Knowledge is Dynamic	Processes that shape knowledge with student.
Knowledge Barriers	Processes that are preventing student learning.
Tacit Knowledge	Knowledge that is deeply and often invisibly embedded in practice
Practical Knowledge	Forming knowledge into actions.
Strategic Knowledge	Considering options to select the best one for a situation.

The code *Knowledge Barriers* was drilled down further while *Knowledge Transfer* was divided into *Knowledge Transfer* and *Knowledge Sharing*. In addition, the data under *Practical*, *Tacit* and *Strategic Knowledge* codes were

scrutinised, revealing that these included how this knowledge was learnt by students.

As the analysis progressed, I came to understand the participants' conceptions involved more than knowledge. By following the data, my attention progressed from the 'taxonomy of knowledge' to the 'process of learning'. This deepened my understanding of teachers' conceptions of their actions. Central to these conceptions were an emphasis on practice and the discussion of practice. With this realisation, I concluded that I had identified categories that presented a theoretical direction to focus upon.

3-10.4 Theoretical Coding

Progressing on from focused coding one arrives at theoretical coding; assisting analysis by integrating the categories to become "coherent and comprehensible" (Charmaz, 2014, p.151). The researcher investigates possible relationships between an identified core category and the other categories and codes, formulating hypotheses (Charmaz, 2006, 2014). All the time, the coding represents not only participants' perspectives but also how the *researcher* has made sense of the data, emphasising the researcher's active involvement in co-constructing the data (Charmaz, 2006, 2014).

When this study began, CGT was the underlying methodological framework behind the research. The writings of Charmaz (2006, 2014) had been used to inform the research design and the two main phases of coding within GT. As analysis continued, I became aware of the increasing number of intertwined factors that appeared to influence these teachers' conceptions, and not all were directly focused on a student. I needed a way to pull the resultant focused categories into an integrated set of ideas. This intertwined set of categories resonated with my existing knowledge of the work of Wenger (1998), specifically on CoP. Under these circumstances, I sought advice from Glaser and Strauss (1967) and Charmaz (2014).

Glaser and Strauss (1967, p.46) propose *theoretical sensitivity* to enable one to “conceptualize and formulate a theory as it emerges from the data”. For CGT, Charmaz (2014) proposes *abduction* which requires creativity and imagination on the part of the researcher to reconfigure aspects of existing theories to develop a new hypothesis while continually seeking fresh clues to test the plausibility of their hypothesis. While it might be debatable that CoP can be regarded as a ‘hypothesis’, it did appear to provide an appropriate framework “that explains a particular empirical case or set of data better than any other candidate hypotheses” (Thornberg and Charmaz, 2014, p.164). Consequently, I explored the CoP literature in detail to consider the possibility that this would offer insights into the findings, (see Literature Review). Making such a significant decision to explore the usefulness of CoP involved stepping away from ‘pure’ CGT, so it was not taken lightly.

The use of a theoretical framework from existing literature does not indicate a full departure from the essence of GT, with Glaser and Strauss (1967, p.46) pointing to the potential of combining “concepts and hypotheses that have emerged from the data with some existing ones that are clearly useful”. However, they warn against overly committing to one specific preconceived theory, so as to become blind to alternatives, and insist upon constant comparisons being rigorously applied. The length of time and the painstaking prior analysis are indicators that I did not quickly, or readily, adopt CoP concepts.

Wenger (1998) is a well-established source and CoP can be described as “a well-respected theory” (Glaser and Strauss, 1967, p.255), making it appropriate to consider his work. From my exploration, I concluded that without any manipulation of the focused coding, the ‘big ideas’ within CoP (Wenger, 1998) and those within my study mapped directly onto each other. This ability to map directly confirmed that I had settled on an appropriate frame of reference.

Using CoP did not jeopardise the credibility of my study. Instead, it presented a theoretical lens to bring into focus the particular aspects important to the

participants and to assist with communicating these in a coherent manner. The manner in which I understood participants' conceptions through the lens of CoP did not detract from the participants' lived experiences. Instead, it allowed me to deliver a rigorous and trustworthy interpretation of the participants' lived experiences. I also argue that my consistent and constant use of comparison methods, (which was well advanced by this point), alongside the inductive coding processes advocated by Charmaz (2014) ensured that the findings were conceptually and empirically grounded in the data. This enabled this study to be respectful of the methodological processes of CGT, without being wholly confined to these processes.

3-10.5 The Communities of Practice Lens

While Charmaz's CGT methodology assisted with opening up new and unexplored areas of understanding, the CoP framework offered by Wenger (1998) provided a useful lens for structuring the interpretations of how participants in this study understood their actions with students. The literature review has established that teaching, although a practice usually executed in isolation in secondary schools, can be viewed as a social activity with regard to teachers' collective engagement in defining practice. It brought into clear, sharp focus a synoptic picture of the findings. The framework proposed by Wenger (1998) allowed me to untangle and organise the relationships between codes within, and across, the focused categories.

It proved possible to map the codes onto Wenger's framework. As an illustration, the codes of: *Welcoming*; *Adjusting for student*; *Factoring in stage*; and *Familiarising* each very much fell within Wenger's description of newcomers being afforded legitimate participation. In fact, these codes and the data they represented fitted readily without any manipulation.

As a further illustration, a group of codes arose from the actions of giving lesson feedback in a manner that restricted a student's involvement: *Training – Instructing*; *Directing*; *Arduous relationship*; and *Unbalanced relationship*. They formed a group where the relationship between a participant and their

student inhibited the construction of meaning, confining the student to a marginal position as described by Wenger (1998).

By contrast, the codes of: *Refreshed by student*; *Learning from student*; *Learn about class*; and *Awareness of own progress* very much fell within Wenger's (2000, p.233) description of the importance of boundary interactions, so as to prevent the community "losing its dynamism and... becoming stale."

From the mappings of the codes on to CoP, two main groupings emerged:

- the participants' conceptions of their shaping of students' trajectories into their communities, and
- the participants' conceptions of the experiences, and therefore learning to be achieved, during this journey.

Findings Chapter 4 centres on the shaping of students' trajectories and Findings Chapter 5 on the learning experiences within the trajectories. Findings Chapter 6 focuses on those aspects of a student's formation to which the participants gave scant or no attention, and again draws on Wenger's (1998) framework to interpret these 'gaps'.

3-11 Reflective Summary

This chapter has aimed to set out for the reader the methodology, research design, and methods which were the main components of this study. The chapter began by reminding the reader of the origin, setting, and research question before progressing to discuss the choice of methodology for this study.

The methodology selected for this study, CGT, best suited the research question. It focused on sense-making, beginning with exploring the data and through the successive stages of analysis developed theoretical understanding. The appeal of CGT was its ability to probe deeply into teachers' meanings and actions to interpret their understanding that would

otherwise remain tacit. Shaped by the context of their experiences, their current situation, and perceived future experiences, this reality would be continually under construction. The advantage of CGT was its flexibility, enabling the exploration of emerging themes in response to my evolving thoughts. The removal of the constraint to rigidly follow a predetermined research design enabled the data collection to complement data analysis.

To construct concepts and to specify their interrelationships, required me to ask probing questions, not just of the data, but also of myself as a researcher and the research process. The importance of listening very carefully to what teachers were saying “brings people and their perspectives into the foreground” (Charmaz, 2014, p.8) but also requires consideration of my potential unconscious influence on the research. As the researcher, I had to examine my multiple roles that included university tutor and teacher and consider their possible effects on the research process. By explicitly stating my position, I could monitor continually the influence this may have had on decisions made during the study. Throughout, reflexivity included the use of a reflective commentary and an audit trail of data analysis in the form of memos.

Alongside reflexivity, the use of thick descriptions throughout the findings chapters assists the reader to scrutinise my interpretations of the data.

Careful consideration of the target group and sampling strategies was required as my insider knowledge presented both benefits and potential issues. Ethical considerations were dealt with in line with university policy and I ensured ethical procedures were rigorously followed through a consistent approach to the data collection stage of the study.

With the methodology decided, the design of the study progressed. Data collection involved semi-structured interviews, entailing transcription decisions. Data analysis made use of the constant comparative method introduced by Glaser and Strauss (1967) and advocated by Charmaz (2014).

Awareness of the many issues I could face, not just with sampling but with data collection and data analysis, prompted a pilot study to be conducted.

Conducting the pilot study was an invaluable experience. The participants themselves were supportive in giving advice about the steps of the process they experienced, and the interviews produced interesting data, giving me confidence in my research design decisions and my interviewing skills. For coding, I found that listening to the recordings alongside reading the transcriptions was helpful. While coding with pencil and paper assisted with my immersion in the data for the pilot, it was also clear that using software in the main study would become essential to ensure the data were analysed thoroughly. Through this practical activity, and the support of exemplars compiled by Saldăna (2009), my understanding of the coding process developed; I felt a confidence in transcribing and coding the data now that I had actually attempted the tasks. This bolstered both my confidence and my credibility as a researcher.

For the main study, I did initially continue to follow rigidly the coding processes described by Saldăna (2009). I wish that I could say that 'I gained confidence' but, in truth, it was more that I became increasingly frustrated. This first stage of coding felt like trying to swim in thick, gloopy mud. It was tiring, frustrating and a very steep learning curve. Reviewing advice from multiple authors such as Bryman (2001) and Holton (2007) helped, even if it meant starting the coding again, and again. At this point, I appreciated my decision to utilise software for the main study.

As I became more experienced in applying the processes exactly as described, I could see pathways within the data beginning to emerge. Identification of possible emerging categories indicated that the second level of coding was running in parallel to the first level as fresh transcripts were introduced.

There were unhelpful moments during analysis when I became side-tracked and unanticipated medical interruptions. While I found these moments

disrupted my immersion in the data, they did remind me that sometimes stepping back to look at the bigger picture was useful. Also useful were suggestions by Clarke (2005) for overcoming analytical paralysis and the constant comparison methods for highlighting possible analytical routes.

I definitely agree with Aubusson and Schuck (2008, p.1): “the wise person learns from the experience or mistakes of others; on the other hand, knowledge is not meaningful until your own experience has given it meaning”.

Moving on from this exposition of, and rationale for, this study’s methodology and methods, the following chapters provide an analytical account of its findings, starting with Chapter 4 which centres on participants’ conceptions of shaping students’ trajectories into their communities.

Chapter 4 Teachers Shaping of Students' Trajectories into Their Communities

A criticism of using Constructivist Grounded Theory [CGT] research is that there may be a lack of detail given within the findings chapters. This chapter does present a significant amount of detail to assist the reader in appreciating how I interpreted the data during the coding process and makes evident the mapping to Wenger's (1998) Communities of Practice [CoP]. This has necessarily resulted in a substantial chapter.

The Literature Review has established that working with a student on placement in their department is in addition to teachers' contracted workload. The teachers in this study did not, however, resist this task. This chapter will show how these teachers' involvement in assisting students in developing appropriate practice was clearly evident. The following extract typifies why these teachers invest time and energy into each student on placement.

(314): If I don't spend time with them, and they don't progress then, I have only got myself to blame. They could be back with me next year as a probationer and I can't moan then if I didn't do my bit in six weeks.

The teachers viewed each student, not as just passing through, but based upon the student's apparent commitment, as a future colleague.

It will be shown that the projected pathway for an individual student was constantly shifting in response to that student's degree of participation, their relationship with the teacher, and emerging competence. The student was the traveller, while the teacher's power offered direction.

The following sections will reveal how the teachers' comments demonstrated the impact their own identity and that of the student had on the student's trajectory. Once they had ascertained a student's current state of knowledge about teaching and determined specific areas for development, these teachers either used their power to illuminate potential pathways for learning

about practice for a student to select from or gave the student direct instructions for a single path ahead.

Indeed, it was clear that these teachers responded to the student's needs rather than applied a set course. An additional force acting upon the students' trajectory into their community came from the form of relationship between the teacher and their student. This relationship was a balancing act between professional versus friendly, and honest versus protective. The teachers involved in this study were also well aware of the mutually beneficial aspect of their relationship. However, the good intentions of protecting their student also contributed to these teachers phrasing feedback positively, which had implications for assessing competence.

The chapter will delineate how these teachers represented the 'competence' that was the target for each student's trajectory. Rather than passing judgement solely on the student's ability to learn and enact specific routines, they considered the student's attitudes and broad capability alongside their growing confidence.

For clarity of exposition, the themes that have been introduced in the preceding paragraphs will be presented sequentially but the chapter will also bring out their interrelationships.

4-1 Considering Legitimacy

In his 1998 monograph, Wenger (1998, p.101) notes that,

In order to be on an inbound trajectory, newcomers must be granted enough legitimacy to be treated as potential members...Only with enough legitimacy can all their inevitable stumbling and violations become opportunities for learning rather than cause for dismissal, neglect, or exclusion.

Applying this insight to the current study, the question arises of how the teachers involved in this study viewed this matter of legitimacy and what

markers they employed to determine whether or not students would be granted the status of a legitimate potential member.

Although students begin each placement as a stranger, a newcomer to the department and the specific school context, they have already begun to learn about the profession and so are “developing an identity of participation” within the constellation (Wenger, 1998, p.56). As they progressed through the course, students were expected to have increased knowledge and skills to draw upon, as the extract below indicates:

(314): Depends on the term... If it is second placement, my expectations are higher, but obviously depending on the term [placement] but initially, if it is term one, it will just get them in and get them into a school.... Term two, I have got expectations that they should be fairly quick up to speed and be able to teach a block of lessons as opposed to just an individual lesson. I don't mean like day one, but I mean within a couple of weeks. And then term three, I am looking again that, within a couple of weeks they should be starting to behave like probationer teachers. So that would be my expectations as they come in.

For each placement, the teachers determined the extent of legitimacy based upon a variety of sources. They described using many markers to consider the legitimacy of a student as a participant, with the initial focus being upon a student's degree of commitment and interest in practice.

An initial source could be the placement report compiled jointly by the previous placement school and university tutor, containing information about the student's developing teaching practices. All these teachers were aware of this report's existence, typically expressed as:

(304): I know that the Regent¹⁸ and the mentor always get a wee bit more information than we have ...

The extract above exemplifies these teachers' initial response when asked about the placement report. When prompted to elaborate on their statements

¹⁸ Regents: are those teachers, usually senior staff, who are charged with overseeing the placement, support and progress of student teachers. (Education Scotland, 2015a, p.33)

they divided into those who viewed it as a reliable guide to a student's likely actions in their own context and those who did not. Those teachers who viewed the placement report as a useful source of information gave responses that ranged from curiosity to aspirations to use it to customise experiences, as exemplified by the extracts below:

(310): I want to know if they were really struggling and maybe have problems prior to that point that may be a thing...

(306): It would be nice to see the areas that he needs to work on, as early as possible would be ideal.... It is good to see that because that would help pick the classes that they are most likely to get ... we can truly try and tailor the timetabling ...to the student's needs...

These accounts indicate a proactive response, planning how to immediately work on issues. Planning students' experiences to enable the development of their weaker areas does increase the necessity for teacher involvement, which I suggest, shows not only these teachers using their power to maximise learning opportunities for students, but also their investment in potential new members to the profession.

By contrast, the remaining participants expressed scepticism towards the content of the placement report, as illustrated in the accounts below:

(314): I see the benefits of getting prior information for placement two and placement three, but I also see the flip side of not having the information, in case they have had a bad experience, or whatever. So ...give folk a fresh start, just in case.

(300): It would be nice to know what they want to get from the placement, but not necessarily to know what they're like because you get a biased view from a previous placement. ... I think that when they come here, it's a fresh start, so we have to just kind of give a fresh start, just to see what they're like on the first few days and take it from there.

The commonality across this group who viewed the report's content with reservations was their experience in a promoted role. Their statements imply that judging teaching practice is subjective and can be influenced by factors

that do not relate to the individual under scrutiny. They appear aware of variation in ideas of competence and expectations of students. I suggest these teachers do not automatically accept the report as fact, but as one conception of reality.

While the purpose of the placement report is to indicate the stage of student development and their ability to demonstrate certain skills, which some of the teachers in this study considered useful, the remaining teachers saw more harm than good in the report, so avoided being influenced by its content.

All of the teachers, however, talked about using initial impressions to judge a student's potential as a teacher. For example, teachers 317 and 305 spoke about assumptions of an individual's ability to cope based upon physical age and preceding work history:

(317): Maybe their age would be guidance as well ... if they are fresh out of university, is the maturity level there? Or, if they have had experience in a career ... so they can handle situations.

(305): Sometimes I think the ... young students coming in and they know it all and it blows up in their face and they don't hide handle that element ... And that might be very simplistic, but I have seen it too many times for it not to be the case.

One contributor appeared to assume that mature students, due to their previous career, experienced culture shock:

(308): These people have been in industry and they don't know what kids don't know, and they get quite a shock when they realise how much stuff kids don't know.

These teachers were assuming that students' life experiences to date might limit their capacities and lead them to have misconceptions about teaching. Other teachers in this study alluded to pigeonholing students based upon their instincts, as illustrated by the accounts below:

(300): Like when you meet any person for the first time you quickly pick up on what they are going to be like, and the same is with a new teacher

[student]. I know that some people work hard and get there eventually, but a lot of times you can tell straight away, whether or not they are going to be good or not.

(311): My first thing is to try to get a feel for what I think about them as a person. If you can get a kind of, I'll have a chat with them about nothing in particular, 'Hello, how are you? Where do you come from?' Trying to get some sort of indication of what kind of person they are. I think very quickly from that you can get an indication of how much support they are going to need. That is my prime thought, just what will this person need.

(304): I think quite early on, you know how it is going to go. I think you know whether you're going to have a really good relationship with them and with you going to see them progressing through placement or not.

Interpreted as based upon a combination of prior experiences with students and with other teachers, the 'instincts' expressed in the extracts above form a tacit component of these teachers' personal knowledge. Here, the teachers' identities, shaped by their background histories, influenced their way of viewing the world and informed their impressions.

As a third source of 'legitimacy', all the teachers in this study referred to categorising students from direct engagement, establishing their existing understanding of practice and the strength of their commitment to teaching. These teachers demonstrated an awareness that students need an understanding of how to interact within the community. Accordingly, the teachers initiated interactions with students to share histories through informal chats so as to develop a sense of belonging, present the environment as inclusive, and indicate that the student was considered an adult. This final point is important in adult education (Brookfield, 1998). By being hospitable and welcoming, the teachers interviewed expressed interest in the student and aimed to establish common ground, as highlighted within the accounts below:

(303): I do like to have a conversation like: 'Where have you been, what have you been doing, how did you find it, what's your approaches with

this, this and this?’ So maybe, just like a wee conversation, informal conversation.

(304): I kind like to get to know them myself anyway so I would always, right my way [is] to ask how they had got on and maybe enjoyed their previous placement and stuff like that. ...I think it’s just I always do make an effort to get to know them professionally, but personally as well, I suppose, like what their undergraduate degree had been or whatever, what they did before they came into teaching.

*(317): It would be handy to know if they have had *any* previous experience, whether they have... Is it TEFL?... Award or if they have been learning assistants or if they have visited other schools previously to see if they had any connection with education would be useful.*

These accounts demonstrated the teachers leading the conversation to probe for information, which could establish an impression of students’ level of expertise - the current state of their knowledge of teaching. This indicates an awareness that each student does bring some knowledge with them, even into their first school. They viewed an individual’s experiences as a pupil and student as shaping their way of thinking about teaching. This finding complements those from research by Entwistle, *et al.* (2000). Entwistle, *et al.* (2000) concluded that an individual’s prior experience as a learner strongly influences their conceptions about teaching, as these prior experiences have formed into personal knowledge through which the newly-acquired professional knowledge is interpreted (Tamir, 1991)

These teachers mostly accepted statements of previous success, or support needs, provided by students. However, one teacher (311) developed their discussion to highlight the *student’s* assessment of their development needs, giving responsibility to the student:

(311): I will often ask them what they think their development needs are, and obviously they come with, if it’s not their first placement, they obviously will come with some idea of what they think they need and I’ll be thinking ‘What is it that they need to progress?’ And then I try to put the right things in place to make sure that they can access that progression...it’s just about knowing that they have reflected on where

they have been before and what they think they need. ... that's important information, I think, and where they have been before and the type of schools they have been is crucial.

Teacher 311 considered the context of students' prior learning and the reliability of the student's own summary judgements of their practice, suggesting that teacher 311 is immediately assessing if a student is an active participant in their development.

However, while the accounts above illustrated a focus on establishing existing learning and understanding, the following quotation illustrated a different direction to the conversation:

(305): What kind of baggage is a student bringing? What has their day been like so far? Have they got childcare issues in the morning? Financial worries because they are doing training? Is there other issues over a previous placement? And relationships in that placement and how will it spill over into the current practice?

By asking questions of a more personal nature, this teacher was seeking clues to adjust their support and levels of tolerance concerning student's attitudes and behaviours. The teacher viewed the individual as more than a student, considering other factors contributing to their identity. Like Sankar, *et al.* (2011, p.56), there was a recognition here of how a student's life circumstances, history as a student, and existing identities may impact upon their practice in the classroom. On this theme of the interaction of different facets and identities in a teacher's life, Olsen (2014, p.84) argued that researchers, "in order to better characterize the multiple, simultaneous, often interconnected influences and effects that reciprocally shape teachers' lives, knowledge, practices and career constructions", replace 'knowledge' and 'teacher learning' with 'identity' and 'teacher identity development'. Olsen (2014, p.84) justified this change in terminology since "the mostly intellectual, linear, epistemologically narrowed features of 'knowledge'" were unable to encompass the practice of teachers.

The fourth, and the universally trusted source of students' legitimacy, was articulated by interviewee 306:

(306): When they [student] get into the classroom we find out about them.... can they build a rapport with the students [pupils]?

Earlier paragraphs have established how the teachers in this study varied in their views of the usefulness of the placement report and in how they formed initial impressions of a student. This fourth source had the teacher forming impressions based upon observing the student interacting with pupils.

4-1.1 Summary of Legitimacy Section

The development of students is significantly influenced by their placement experience (e.g. Clarke and Jarvis-Selinger, 2005; Crasborn, *et al.*, 2011). If a placement experience is to be successful, students need to be viewed as future entrants to the teaching profession or, using Wenger (1998) term, as 'legitimate' by those in the placement departments.

This section has explored the various sources the teachers in this study used to determine the legitimacy of each student they encounter. While some utilised the official information available through a previous placement report to tailor the placement, others chose instead to wait and meet the student before making adjustments. This difference between the teachers could have a causal link to their prior leadership experience which is worthy of future exploration.

The assumptions the teachers in this study made upon first meeting a student are formed from each teacher's background history. However, these assumptions were challenged when histories were shared during informal chats. Although described as 'informal chats', this was not to represent them as trivial as these conversations had multiple purposes for the teacher: to be welcoming; information gathering; initiating a relationship; and establishing common ground. All of these purposes give an indication that legitimacy has begun to be considered.

While different sources were drawn on when forming their initial judgements of students, it was reassuring that these teachers focused most upon the initial actions of students within the classroom to confer legitimacy and support participation so as to develop competence.

Participation is presented by Lave and Wenger (1991, p.54) as a constantly changing process, which they term as “trajectories of participation”. How the teachers in this study conceptualised this understanding of participation with regard to students forms the next section.

4-2 The Trajectories to Participation

At the beginning of a placement, university guidelines request that students observe teaching and pupil behaviours within lessons in the *initial days* of their placement, alongside listening to teachers discussing practice and observing their everyday interactions with each other. All the teachers in this study viewed observation of both teacher practice and pupil responses by other practitioners as a *normal* part of community and constellation activities, as the following extracts illustrate:

(315): It doesn't bother me at all, I don't mind. I just sort of, in a way, forget that they are there and just carry on. So, yes, it doesn't faze me, I don't think.

(310): ... I enjoy it ... I know how to do the job, so I have no problem with people coming in and seeing me do my job. I've got no problem with people coming in and tell me I'm doing things [we both laugh] I could probably do things better, I am very open to criticism, constructive criticism, so I don't mind that...I just see them as another friendly face in the class. The way the class [room] is set up, in the groups and stuff...We try and have a good communal feel to the classroom so that is not an issue for me, having another person in there.

Clearly, these quotations indicate these teachers, regardless of the observer's purpose, considered being observed was part of practice. Although viewed as inevitable, interviewee 304 admitted that they did not necessarily enjoy this aspect of practice:

(304): I don't love being observed. But I do see how it can be beneficial, obviously, to the student coming in and seeing how a class is being taught before they take it on.

While indicating a dislike of being observed, this participant realised benefits for students went beyond general familiarity with classroom practices. The conversation continued:

(304): ...concerns she had about the class she was teaching of mine quickly disappeared when she saw how I dealt with them. She thought, 'Right, I can do that'.

This teacher was thus sufficiently confident that their teaching would give confidence to their student.

Overall, these teachers' expressed certainty that by watching practice, students develop familiarity with what occurs and saw these observations as giving a reliable guide to their everyday practice, with an example provided by contributor 316 illustrating why this was the case:

(316): I think I always am pretty structured so, I mean I don't change, I am not going to do something different, because then they [pupils] would think, 'What's he on about, he is doing it different', so I think we pretty much get what they see and I try and help them and actually refer to it.

The suggestion that pupils kept practice consistent and honest was also evident in the following quotation:

Question: So, you don't adjust what you do or how you do it, once you've met the student? You've got your way of doing and it's comfortable for you?

(300): Yes, I think so. I mean if I was being observed by anyone, the kids will pick up on it. In fact, when HMIE were here, the woman was observing me with my S2 class and ... she took one of them away and when she fed back to me, ... she [HMIE Inspector] had said to the pupil, 'Is Mr. X normally like this?' And the pupil said, 'Actually, no. He's usually funnier than he is today.' So, I suppose I did change slightly... If I do change, it is certainly not intentional.

In describing this experience, contributor 300 highlighted that pupils notice even small changes to usual practice. While these teachers were content with students observing their practice, it was significant they did not reference discussing these observations with students at the end of a lesson or later, (see section 6-4).

These teachers also expected students to spend time in the department, actively listening to discussions about teaching in order to learn the cultural model appropriate to the context of the department and individual classes. Through students taking the opportunity to integrate, they are increasingly exposed to life as a teacher, or as Hodkinson and Hodkinson (2004a, p.29) argued, “we need to belong to learn”.

Initially, these teachers viewed students as non-participants, as gathering enough information to have a sense of teaching and decide if they wished to continue in the profession. By offering opportunities to learn more about practice, these teachers can be seen to be offering through their actions an invitation to become legitimate peripheral participants (Lave and Wenger, 1991).

4-2.1 Inviting Legitimate Participation

By continuing with placement, students are presumed to have accepted the invitation of membership and begin participation as an insider (Wenger, 1998). The following extract by interviewee 300 exemplifies a typical invitation:

(300): Every time we have a student, I'll say to them, 'Please get up and wander around, speak to the pupils, ask them what they're doing, ask them if they know what they think they're doing', because that's kind of encouraging them [student] to make sure that when they are teaching them [pupils], they are making sure that they explain to the children exactly what they are learning about.

This invitation to engage with pupils signals the expectation of student learning and a degree of participation in the community (Wenger, 2010).

Observation had intensified to involve more than just watching to note routines (Rogoff, *et al.*, 2003). The purpose of observations is now about learning the routines of what works with the class at that time; students are learning information and skills in context in order to “understand what matters, what the enterprise of the community is, and how it gives rise to a perspective of the world” (Wenger, 2010, p.180). Termed as a phase of ‘*intent participation*’ by Rogoff, *et al.* (2003), students observe actively to build the confidence to attempt these routines themselves. Rogoff, *et al.* (2003) relate the degree of active observation to the student’s personal history of learning. These teachers placed importance on students knowing practices specific to the community, although they did not necessarily expect that students automatically developed understanding of the rationale behind these routines and why they worked.

The following extract hints at a tension that some teachers in this study felt when observed by students:

Question: The way that you act with the student, do you change it, depending upon what the student is like or time of year or class...?

(317): No difference.

Question: You know what you’re doing and what works?

(317): Yes, I just got on with it... But also, I need, I’m there to show the student how it is done.

The key feature here is the apparent contradiction. Interviewee 317 initially stated they did not adjust their teaching practice. Yet, the subsequent statement appears to indicate the opposite, they did indeed model for students. Situations where these teachers described deliberately modelling aspects of practice for students are exemplified below:

(316): ...and then I am not a great group work, pairs work, but there is a place for that, and I go with that and we do, we have done some great group work now and again and I will try and manipulate it so that it is on the go.

(303): I think the whole thing about teaching is there is the structure of what your lesson should look like, and we all know that in hindsight sometimes that doesn't happen, but when you've got a student in, you want to showcase what that should look like so ...right... It's never going to happen every single lesson because that's not life, but you do want to kind of showcase what it would look like when it does happen.

In the second extract, note that interviewee 303's desire to "showcase" a lesson structure implies this was not standard practice. The apparent contradiction with earlier statements of 'not modelling' required further consideration, and I concluded that these teachers did model practice, in the sense that they would explicitly introduce within a lesson types of practice and strategies that they might not have employed at that point if a student had not been present. Further supporting this interpretation was the extract below:

(308): It is good for the students, seeing that. I just hope that they realise that ... what you are doing, this isn't how you are everyday or every lesson. ...I suppose I do try and explain to them [student], if I get a chance, because you don't want that to be the... I suppose if they're [student] seeing you for a while, then they will see you do all of those things, but I'd probably make them aware that's what I was doing anyway.

While the above extracts referenced modelling aspects of practice in a positive manner, interviewee 314 admitted to manipulating their practice to include 'not so acceptable' aspects, but only with pupils who would not give the game away:

(314): I may also slip the odd thing in that is ... that I shouldn't really do, but I could probably get away with, with the class that I know really well, especially the term two student, to see if they pick up on it.

In describing the modelled practice as "could probably get away with", interviewee 314 appeared to be attempting to prompt students to be critical, rather than passively accept what they observe; to become an 'active agent' in collaboration, as opposed to the 'empty container' accepting transmitted material. In contrast, the modelling previously described by interviewee 308

can be interpreted as focused upon demonstrating a range of teaching strategies early in the student's placement. Intentions behind modelling, such as those described by the teachers quoted above can be viewed as offering encouragement to students to participate actively or attempts at addressing individual student needs. This demonstrates that, although students were held to be largely responsible for increasing their participation, teachers are not powerless in directing students' journeys.

The findings also revealed further strategies the teachers in this study used to exert power to direct phases of participation. They described creating a *way in* for students to become involved, for example, asking students to deliver an aspect of the lesson, such as marking the starter questions with pupils or assisting pupils with individual work, as the following account illustrates:

(316): I would always size them up by giving them little tasks to do. Like I might say to them, 'Make up some oral questions' so they might only have 15 minutes, but I would be interested in what they come up with...to suss out how good they are and what their knowledge is ...

While considering students' capacities for invention and their current knowledge, interviewee 316 created opportunities for students to take ahead some teaching activities but did not focus on exploring the purposes of these activities.

Drawing on a key finding running through this subsection, in facilitating participation by providing occasions for joining in, the teachers in this study can be seen to be viewing the student as an insider, a potential teacher, rather than an outsider (Wenger, 1998). Wenger (1998) identified two trajectories for insiders, based upon the interaction between participation and non-participation. These will be discussed in the two subsequent subsections.

4-2.2 A Circling Trajectory

The interviews with the teachers in this study revealed instances where students were constrained to a more marginal position. Wenger (1998, p.166) defined marginality as “a form of non-participation [that] prevents full participation”. He goes on to observe that: “Peripherality and marginality both involve a mix of participation and non-participation and the line between them can be subtle. Yet, they produce qualitatively different experiences and identities” (p.166).

Applying this insight to the current study, teachers facilitating participation in observation and practice but impeding deeper participation by consciously or unconsciously not recognising a student’s identity transformation, can be viewed as limiting students to a more marginal position.

Instances of marginality were evident across all the interviews where the teachers considered those students who appeared to them unprepared to receive advice, or unable to modify teaching practice from advice, as exhibiting limited aspirations to further their identity of participation (Wenger, 1998). These teachers acknowledged feedback was only useful if students valued the content and responded in some way, as interviewee 305 articulates:

(305): Giving the feedback is not an issue for me, it is what they do with it afterwards that matters, that makes the difference.

Therefore, when a student continually did not respond to support offered, it affected that teacher’s judgement of that student’s suitability for the profession, as exemplified in the following interview extract:

(317): You can say to someone, ‘Actually, why don’t you try it this way?’, and you can say it so many times, but if they don’t follow the advice then you know that [the profession] is probably not for them after lots of evidence and watching and all that stuff.

By not acting upon advice, (a form of non-participation), students were not learning the actions of members so were considered as rejecting the possibility of deeper participation and aligning their identity with the community. Although these students would continue to practise, their teacher no longer held expectations of deepening their participation and therefore of them succeeding in achieving competence.

The following quotation suggests that when students are not responsive to advice, they may risk offending the teacher:

(304): I find it quite hard when if I've not been happy with something or if they have not taken my advice on board...I wouldn't say I treat them any different, but ...

This quotation indicates that an apparent lack of adjustments to student practice would affect the relationship between the teacher and student. This participant left the sentence hanging which, combined with their tone of voice and body language, suggested embarrassment. Rejecting advice that would enable deeper participation did evoke negative emotions in the teachers interviewed. The typical emotional responses to such behaviour are indicated by teachers 315 and 314:

(315): Some of them haven't got it because they've not been willing to change and that is part of the disappointment ... disappointing that they haven't taken on board the help that they... should have taken on board.

(314): I get frustrated when you have a student who thinks they know better and doesn't heed your advice ... and that is really frustrating and ... it can be a long six weeks then.

In these instances, the student was cast as occupying a marginal position as opposed to one of increasing participation. The extracts above demonstrate how students' actions can lead teachers intentionally to empower or disempower their participation. Teachers also described finding it difficult at times to retrain from exerting their power in ways which could inhibit students' authority. For example, interviewee 310 discussed their desire to intervene,

justified as a natural reaction, especially when witnessing pupils misbehaving:

(310): It's the same every time, you feel kind of, that you want to intervene, but you can't. But that is just natural, isn't it?

Question: Why do you want to intervene? What sort of things do you want to intervene with?

(310): Things that probably I wouldn't see if I was standing at the front of the class. I am like a spy. I can see some people [pupils] messing about and they are probably doing that when I'm teaching as well, but I can see it, so things like that so you just think, 'I'm not supposed to be here. I'm just observing' that kind of stuff.

This quotation can be read as displaying the teacher's struggle between intervening or not. Where teachers do choose to intervene in such situations this can potentially result in marginality for the student by preventing opportunities for learning.

Having discussed marginality, and the underlying actions that can direct students towards such a position, the next subsection will engage with the alternative, peripherality. While marginality views non-participation as 'problematic', peripherality views non-participation as 'enabling' (Wenger, 1998).

4-2.3 An Inbound Trajectory

Like marginality, peripherality has various degrees. A teacher who increasingly shares responsibilities, roles, and decision-making can be viewed as their acknowledgment of a student on a peripheral participation trajectory. Peripherality involves degrees of peripheral participation, where the power lies with teachers to facilitate observation and practice opportunities to address gaps in knowledge, or 'learning yet to occur' through participation, while simultaneously reshaping, consciously or implicitly, the student's identity. The degrees to which teachers viewed, and enabled,

students as peripheral participants are revealed in how those teachers respond when their student takes on a teaching role.

One example of teacher power, articulated very clearly by interviewee 306 while reflecting on and evaluating his first ever experience of having a student in his class, referred to his internal struggle between observing and intervening in lessons:

(306): What I find difficult was just completely stepping back, not getting involved. I think that will be the thing that I change the next time, is learning to step back more, allow things to go on, obviously I wouldn't allow chaos to ensue, but just allow the students to impose their own persona on the class.

In the quotation above, the participant felt that his interventions unintentionally prevented his student's continued learning as a peripheral participant. This is in contrast to teachers with more experience in working with students.

As the following account unfolds, interviewee 310 identified an aspect of weak practice, considered the options available and their resultant impact before concluding intervention was not required:

(310): Maybe I can see, I'm looking at my watch and thinking timings are a bit out and he needs to watch things like that as well, but I don't, I just... I think that would be worse, I don't think it would be a benefit to kind of say, 'By the way...' Just let them [student] have a go at it and discuss it afterwards.

This teacher appears to be considering the situation from the student's perspective. Interviewee 310 puts their responsibility for their student first, so to avoid marginality and enable peripherality by allowing 'experience of' rather than 'protection from' challenges (Fischer and van Andel, 2002).

As a move towards a lesser degree of peripherality, these teachers discussed being actively involved in the lesson delivered by the student,

perhaps even playing the part of assistant, so jointly participating in practice as described by interviewee 304 below:

(304): When the teaching is happening at the board, I'm sitting taking notes. But when the classwork starts, think of an extra pair of hands really.... Yet, I'm not gonna sit that there and let them [pupils] all need help and just ignore them, so I am a pair of hands and I'm, yet I act like a classroom assistant.

Alongside considering their involvement as equivalent to that of a classroom assistant, interviewee 304 spoke about their approach to offering advice to the student during lessons:

(304): If the class are asking me if they should be doing this, then I'll say 'Miss so and so or Mr So and so, would you like them to be doing this?' I'm not going to step on their [student] toes because they are being the teacher for that lesson.

This quotation reveals how the teacher can be seen to be actively deploying their power to show that, at least temporarily, the student is in charge of proceedings. This quotation might also be interpreted as the teacher simultaneously pointing out to the student pupil queries that needed to be addressed. The carefully phrased question directed to the student can be read as an attempt to bolster the student's authority while ensuring that pupil learning was not compromised, a move which reflects what Fischer and van Andel (2002, p.3) have termed 'double loyalty'. In a similar vein, the following extract demonstrates interviewee 317 acknowledging their intention to check pupils' learning and to assist the student:

(317): I will walk around the classroom once he [student] has done the lesson just to make sure that they [pupils] are up to speed ...because if it is his or her first experience, they don't appreciate that they need to be like traffic wardens and be able to see everything and see that lots of people need help at the same time...So that is when I will come in as the guiding, a helping hand rather, and come in and just help the pupils while they [student] are focusing on other pupils.

While these extracts can be interpreted as the struggle between observing and intervening, they could equally be interpreted as: passing judgment on a student's practice; desiring to support a student; or ensuring that pupils' learning progressed. In the Literature Review, research by Fischer and van Andel (2002) highlighted the struggle between assessing or supporting practice. More, however, may be at stake here; the teacher's task is not a simple one. Viewed from the perspective of CoP, the struggles may well include a need to: ensure the future competence of students; assist students' alignment with the community; direct students onto an inward trajectory of participation; and safeguard the primary goal of the community in fostering pupil learning and well-being.

All the teachers in this study described reducing their support to allow new situations to occur and challenge students, as articulated in the set of quotations below:

(311): Instead of stopping the mistake happening, yeah, I think so. I have seen, this feels awful, sounds awful, but I do mean it from the right place, doing it from the right place, from my perspective in the right way, you know, I have seen a student just squirm. They know they're doing it wrong and I've deliberately let them overrun lessons, all sorts of things because... I just don't think, it doesn't do them any good if I control that ... because if you don't overrun lessons and suffer the consequences of that ... Yes, I know it sounds awful but ... And then they go, 'Oh my, I really overrun that lesson', and you go, 'Well done, you have seen what you did wrong'. Yeah.

(305): I am not there to solve all their problems and, even if I can see a problem looming, sometimes I will step back and I won't say that's going to be an issue. I'll let that happen, because then the learning points from that afterwards with the discussion will be along the lines of, 'What went well and what doesn't go so well? And what did we learn from that? And what will you do in the future about it?' And hopefully the phrase will be, 'I'm going to avoid it'.

By choosing to withdraw their own direct involvement in the class with the expectation that the students will face necessary challenges, these teachers aimed to prompt students to question and reflect on genuine experiences, an

essential element of learning as they became aware of what they did not know.

While withdrawing their own involvement, the teachers continued to offer a form of scaffolding during feedback discussions. In the extract below, the participant identified specific aspects of practice that the student was directed to reflect upon:

(319): After the lesson, to be as encouraging as possible, to highlight some pointers that they could perhaps go away and think about and to maybe ask them some questions themselves, like you know, 'Why did you do that method? Why did you say that to the child rather than this?' And so on, just to get them to think about what they have done and to try maybe to draw attention to things that they maybe didn't realise that they were doing or not doing.

This extract can be seen to reveal a quite sophisticated view of how best to deploy observation and support learning from practice. The student was specifically directed to aspects that the teacher has identified as key matters for improvement for this individual - *"to highlight some pointers"*. At the same time, rather than this teacher providing his own direct interpretations and advice, this student was required to reflect on their own actions and to articulate the reasons behind specific teaching decisions.

At times, the scaffold could take the form of the teacher instructing the student's practice. As exemplified in the following extract, interviewee 316 explicitly instructs as they viewed the student's progress as not yet sufficient to allow for deeper participation:

*(316): Some people take a bit longer, actually you tell them, like 'Don't stand out *there* next to the computer, you should be out here' and you are on top of them. Some of them need firmly told sometimes, 'That is where I want to see you, I want you to learn some names so that you actually say "Tommy, don't do that" or whatever, because it means more when you know their names, because they know that you know who they are'.*

The extract indicates that the participant accepts that students progress at different rates and some require scaffolding with explicit instructions to help them to absorb guidance and experience positive results in their practice.

The findings indicate these teachers believed it was through increasing students' immersion that they learned more about the dimensions of practice. Nevertheless, responsibility for full lessons requires a significant amount of knowledge, skills, and understanding. Accordingly, students were not exposed to all the demands of a full membership, but rather to a form of productive peripheral participation which deepens learning and increases competence yet keeps the impact of errors minimal (Lave and Wenger, 1991).

The teachers in this study made judgements of students' readiness, deciding when and where to reduce their various forms of support so as not to overwhelm the student and minimise the consequences of potential damage to pupils' learning. An example would be the teacher remaining in the classroom initially so that a student is not required to manage behaviour, then withdrawing to allow this aspect of practice to be dealt with by the student. These teachers believed that withdrawing from the classroom was essential for increasing students' peripheral participation, enabling them to increase their experiences of managing pupil behaviours:

(304): She [student] was the one that will settle them down without me being in the room just because I felt like she needed to have tried that herself ... They [pupils] needed to see her as the teacher rather than look to me for these things.

In this way, teachers built towards students delivering full lessons, taking on more responsibility for the class, such as in behaviour management, by creating appropriate opportunities for students to expand their practice.

By allowing students to teach on their own, the teachers interviewed for this study gave students the opportunity to experience full accountability for a brief moment, as the following quotation demonstrates:

(303): When you're in the room on your own, and even if it is only a couple of minutes, there is a different kind of sense of feeling for the student and that, and I think that's kind of important, that they do have that sense of feeling before it's, 'Right there you go, probation. There you go, in there', that's it.

Consistently across all the teachers in this study, awareness of the emotional dimension of practice influenced their belief that removing their reassuring presence was an essential aspect of preparing students holistically for the future. Emotions are recognised as core to the work of teachers given the necessity of personal investment in practice (Day, 2004, p.45).

When present in the classroom, the participants in this study considered how their actions would affect a student's accountability for the lesson and in general, although not invariably, used their power to increase a students' degree of participation. They consequently expected an increase in the student's learning and transformation of their identity as a teacher. By rising to this challenge, the student was seen to demonstrate a deepening participation, thereby becoming better prepared for future practice; participation thus has a centrifugal effect, drawing students further into the community.

However, students may never be truly viewed as full participants within the specific community. Teachers have the power to intentionally, or unintentionally, keep aspects of practice hidden or at least not exposed to their student. In the extract below, interviewee 319 explains one aspect students are not allowed to experience:

(319): If there is something serious like that issuing a detention something like that maybe the student doesn't necessarily have the power to do. . . when a student starts with us, we go through the punishment system that is available... so, if a pupil doesn't hand in homework, they give them a punishment exercise. When it is a detention, there is quite a bit of admin alongside it, like what date they should go for the detention and whatnot. I think it's just generally regarded that. . . the parents don't sort of come back and say, 'Who's this?'

Also, the teacher's relationships with others as part of their collective histories permits non-verbal communication or 'insider' jokes students cannot understand, thereby limiting their full membership to the community.

The account provided in the preceding paragraphs might be read to imply that moving through phases of participation is a linear path. However, this is far from the case. Through close analysis of the study's data, I have concluded that the process is more reminiscent of a pinball machine. One knows where the ball begins, there are possible exit points along the way, and there are many possible routes, with opportunities to revisit various phases. The pace is dependent on students giving indications that they are ready to proceed and on teachers deploying power to shape the trajectory. As such, participation is not a fixed, static situation nor are the various phases of participation viewed as independent.

4-2.4 Summary of Trajectories

This section has set out how the teachers involved in this study viewed both students' responses and their own actions with students as guiding students' involvement with their classes. The degree of involvement with a class was portrayed as a dynamic, constantly evolving and complex process with teachers responding to students' actions. Their accounts revealed that they wished to treat most of the students they encountered as legitimate peripheral participation. Lave and Wenger (1991, p.29) defined legitimate peripheral participation as concerning:

the process by which newcomers become part of a community of practice. A person's intention to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a social cultural practice.

Earlier, as part of legitimacy, the teachers in this study made reference to informal chats as beginning to establish a relationship with a student. The following section focuses upon the conceptions behind this relationship.

4-3 Relationships

Section 4-1 established that the teachers in this study viewed 'informal chats' with students at the beginning of placement as having multiple purposes, including developing their professional relationship. The importance of the teacher/student relationship points up the social dimension of participation, this social dimension being an "essential aspect of learning" (Wenger, 1998, p.4). All these teachers were open about the complexity of this professional relationship, a complexity derived from the conflicting purposes behind the relationship. The most penetrating account of their awareness of the complexity came from interviewee 306:

(306): It's as a supporter, it is not top-down, I'm not their ruler. Again, there has to be some degree as I am the experienced person, but then again, we are adults as well, so I would try and avoid treating them as pupils.

The teachers revealed an understanding that the form of their relationship with students was crucial. Across the interviews, these teachers consistently suggested a productive teacher/student relationship is a balance between 'professional' and 'friendly', as expressed by interviewee 311:

(311): It has got to be business-like, I think it's important to have a kind of a separation because you want them to think about the right kind of things so it's gotta be business-like. At the same time, it can be friendly if you're going to support someone. And you got to care for them, I think, that helps if you care for them so, I think. but I do, do try to make sure that if you keep that little slight sense of the business-like you don't feel, you want to say things that are maybe not easy, for example, so you can't be too 'you're my biggest pal ever', kind of thing, but definitely friendly.

In the account above, interviewee 311 felt a relationship focused upon students' development and the necessity to be honest with them prevented superficial discussions, a position that is further illustrated by the account below:

(315): I think you need to be friendly, friendly but firm, I suppose. Because otherwise they wouldn't come to you if they have got a problem so. Yes, I

think so... you can't be too, you know, say 'Oh no, nothing is wrong, it is not your fault.' So, you have got to be ...friendly but firm.

The professional relationship between teacher and student may give students a sense of belonging through being friendly, but this had to be in tension with considering competence. Alongside honesty, the teachers suggested establishing a professional distance enabled impartiality when feeding back on student practice:

(308): I try to keep it professional, I wouldn't try to get too close to the student anyway because they are there to learn and it would be unhelpful to them to build up too much of a friendship... hopefully you keep yourself sufficiently objective.

The interviews revealed these teachers' attempts to remain impartial, while also including comments that can be viewed as revealing a desire to safeguard students.

The teachers expressed responsibility for student welfare as well as their learning, something for which interviewee 314 below clearly felt some degree of accountability:

(314): I don't know what type of relationship... Is there a bit of protection? A protective one? I don't know. I'm not quite sure actually.

All the teachers expressed concern for student welfare when giving feedback on their teaching. During feedback discussions, these teachers considered the negative effects their comments might have on the individual student and adjusted phrasing accordingly. In the following account, observe the way in which interviewee 308 moderated feedback because of concerns for the student:

(308): I just try and make it one or two things because if you give them every single thing, I try to be positive even if something hasn't gone quite so well because otherwise, you don't want them coming in anxious, you want them sleeping.

While the teachers in this study demonstrated a clear concern to safeguard students and their feelings, there was also a contrasting force at play. This contrasting force is discussed within the next section.

4-4 Competence

Eraut (1994, p.160) offers a simple definition of competence: “tolerably good but less than expert”, which fits very well with the description of competence in teaching set out by the General Teaching Council for Scotland [GTCS]. The Standards for Registration [SFR] describe the basic organisational competence of a fully registered teacher. All Scottish teachers must be registered with the GTCS, which offers a suite of Professional Standards that set out a staging process based on levels of expertise, from ‘Registration’ through to ‘Leadership and Management’.¹⁹

Official standards have to be interpreted and employed by individual teachers. For example, the following extract demonstrates that different standards of competence can exist within a single department and hints at the implications for students as they move between classrooms:

(304): What I think is good is not necessarily what another teacher is going to be praising and thinking that they are doing a good job on... so I think that they have got to see what is expected. Like, they've got to do similar things to what like I would do as the class teacher for me to think that was good because that's what I think is good.

One interpretation of this statement could be that this teacher expects students to observe then reproduce their practice as an acknowledged peripheral or marginal participant, adapting to the teacher's practice in a one-sided view of learning. However, a more convincing interpretation would be that it indicates an awareness of various local regimes of competence. This alternative interpretation is reinforced by interviewee 320, who also shows a

¹⁹ <http://www.gtcs.org.uk/professional-standards/standards-for-registration.aspx#>

clear awareness of the impact on students of different standards of judgement:

(320): I do always try my best for them, but it is very interesting that if you pull them up on something, point something out to them, then the next lesson you can see that they are actually making sure that they are doing it. I think that, 'Yeah, they've listened, they are trying it' and hopefully that will just be embedded in their every day, the next lesson. But then again, they might go to somebody else and get completely different advice, so they don't know whether they are coming or going. But that is because it is different teachers with different classes with different pupils.

Accordingly, each teacher potentially judges a student's practice differently, as indicated in the findings of studies such as Ellis (2010). The SFR serves as the reified artefact for the constellation, and each community within the constellation uses the SFR terminology for ease of communication. Nonetheless, each community has its local "regime of competence" for students to navigate (Wenger, 2010, p.180).

The teachers in this study expected to share their competence and professional knowledge with students through their feedback on student practice. It was anticipated that the students would make sense of their experiences in the classroom and learn how to use the various artefacts within the community. An example of these teachers considering practice against their own judgements of competence is provided below:

(311): I might have a general kind of observation sheet, but I'm also focusing on the things that they think they need. But, if as we go through I think, 'Well, actually, I'm not sure they do need that, they seem to be all right to me', I tried to maybe start to think about things they might need. That's my way forward and also try to do different kinds of observation. So, one day, I'll think that their movement or one day I'll think about their voice. You know, I will do the general, but with a focus of, so I kind of try to think about all things I think might be important in the classroom and doing that.

While the extract above illustrates the local impact on competence, it also includes indications of students being considered as legitimate participants so creating a social history of learning that contributes to their competence. Furthermore, the teacher was seeking information to guide improvements in

student practice rather than acting as a primary assessor. By offering ideas and advice on areas for improvement based upon their own criteria, each teacher shared their definition of competence.

In their deployment of criteria and expectations for membership, or competence, for their communities, teachers can be seen to recontextualise the SFR to their local context. Interpreting the SFR to their local context contributes to the variety witnessed across teachers' practice, which is discussed in section 5-2. After all, practice belongs to its community, reflecting members' negotiation of meaning within their local context with students navigating the forms of competence for each community (Wenger, 2010).

However, the assessment of competence for a community of practice does not fit readily with the process used in awarding the teaching qualification where a global and binary, pass or fail, judgement is made at a specific point in time (Eraut, 1994). Eraut (1994) proposed that professional competence involves both a binary judgement and a novice/expert continuum, while noting the continuum was reserved for the academic, not the practical, component. As the following accounts demonstrate, some of the teachers in this study considered how good a teacher the student might become:

(316): I think, it is just individuals, sizing up individuals. You meet some people who are reasonably competent and they will get by, but they won't actually set the heather alight, sort of thing, they know how to survive, they are survivors ...

(308): You've got to be looking at what is going on, and they [student] need to be sensitive to all of that and that's gonna ken whether they are a good teacher or not...

(314): If it is a good student, and they are going through and they are ticking all the boxes, a good student doesn't have to be someone who is perfect, but someone who is listening and making progress.

Rather than focusing upon specific areas of practice, it was general demeanour and attitudes demonstrated by students that were viewed as essential. These extracts can be read as indicating that while some of these teachers appear to understand the SFR as providing 'tick-box' criteria, their own regime of competence was dynamic and requires ongoing learning. Embedded within competence is the contextual knowledge necessary for practice, which includes mutuality of engagement, accountability to the enterprise, and negotiability of the repertoire (Wenger, 1998). Hence, viewing practice is viewing competence. There is some acknowledgement by the GTCS that its standards cannot be straightforwardly applied but that locally determined judgements are required. They note that their guide to Professional Action: "does not address in detail how judgements will or should be made. It is not intended that the Professional Action should be used as a checklist"²⁰. The themes introduced in this chapter of the role of personal and local knowledge and the associated variation across teachers and schools in their practices and judgements will be explored further in the next chapter (Chapter 5).

The SFR gives a central place to personal commitment, as did these teachers as the following quotation illustrates:

(308): The things I'm really looking for is that they are committed to doing it, that they like kids, they like the whole school education dynamic and they like seeing kids come on.

Equally, the teachers in this study placed significance on listening and responding to advice, (matters that are included within SFR), as exemplified below:

(308): I'm looking to see someone who is keen, who is coming and saying, 'Look, these are what I want to try' and coming asking you after the lesson, 'Did this work?' Or, 'Was that the right thing to do?' Or, 'Was it okay to do that?' So, they are actively trying to really pick up on as quick as they can.

²⁰ <http://www.gtcs.org.uk/professional-standards/standards-for-registration.aspx#>

Analysis revealed that these teachers viewed competence as general capability and attitudes rather than simply the ability to perform specific tasks. They highlighted the need for an open-minded inquiring disposition that they saw as key to developing understanding. Interviewee 308 explained why the lack of such a disposition would be distinctly problematic:

(308): Sometimes you think, 'This person isn't suited to teaching' because they are not picking up on things that matter... they're seeing it from their own point of view. Really a teacher has to be engaging with everybody and they are also not picking up on some things... if someone says something, then you have to think, 'Oh right, that is why' not rather sort of think, 'Oh no, my way is better'. If you get any of that, then it is not going to go well for you anywhere really.

The account above also implied that not only interactions with pupils but also those with colleagues were significant, as the following quotation states explicitly:

(305): Being a teacher isn't just about being in a classroom, it is your interaction with your colleagues within your department.

While collegiate working is important in itself, (as emphasised by teachers 308 and 305 above as well as featuring within the SFR), also, significantly, it suggests a broad, educational approach rather than a narrow, training approach to competence (Eraut, 1994).

Competence within a community demands more than learning routines and procedures for that community, "the rules of what to do when" (Wenger, 1998, p.160). When the teachers interviewed for this study felt the students' focus shifts from their own performance towards concentrating on pupils' learning, they viewed competence as emerging. These teachers saw students then beginning to trust their own decisions and exercising their own judgements and character by accepting increasing accountability. Accountability is a dimension necessary for competence, with these teachers discussing specific indicators expected in students' actions based on placement stage, as exemplified below:

(311): Much more nerves for placement one, I'd expect them to ask me lots, lots more questions. They weren't asking me questions, I'd be worried. Whereas placement three you're kind of looking... placements three, they are asking more questions about, 'How exactly do you teach this? What, what would you do if this happened?' Whereas placement one, it's much more, 'How do I get into the classroom, how do I start the lesson?' Really straightforward kinds of questions, whereas by placement three you are getting much more in-depth kind of questions.

Students were thus expected to engage more deeply with the practices of teaching and display more initiative as they progressed through the year. This quotation also appears to show exchanges becoming more collaborative and constructive between partners in learning.

While interviewee 311 above described their evolving expectations for students' interactions with them, the next extract indicates a distinct change in relationship, moving from expecting compliance from students to follow instruction towards actively engaging teachers in discussions, suggesting a deepening of their membership in the community:

(305): In term two, I'm looking for them to have that flexibility...in that third placement I would be looking for students to start opening their mouths and talking about the issues.

In the extract above, interviewee 305 expects students to have reached specific milestones representing the institution's views of competence after each placement. As students' participation in practice deepens, activities begin to include discussions, which evolve to focus upon co-construction of knowledge, negotiating the meaning of practice and enabling students increasingly to align their identity to the community. This can be seen in the later discussion in section 5-1.1 of the following chapter as one of the priorities teachers had for ITE.

4-5 Chapter Overview

Within this chapter, I have presented findings centred around the theme of teachers' shaping of students' trajectories into their communities. The roles teachers enact with students are complex and dynamic. Those teachers interviewed for this study exerted their power to influence these roles and resultant relationships so as to: steer student's learning to specific aspects of practice; shift their participation phase; or adjust control across the teaching and learning processes.

These teachers believed that engaging students in conversations had multiple purposes: to ascertain their perceived level of interest in the domain; to invite their participation; and to take first steps in building a trusting relationship.

As an indication of valuing a student, the teachers in this study would facilitate opportunities for their active participation. However, these teachers did seek to determine a student's level of engagement with teaching and to assure themselves of their commitment before feeling confident in allowing them to teach their classes. A student's degree of apparent eagerness for opportunities to learn appeared to affect whether these teachers enabled that student's peripheral participation or placed them in a more marginal position.

The teachers in this study regarded a mutually respectful and trusting relationship as important. This requires developing a sense of belonging in students and is fundamental for an effective community (Wenger, 1998). This is in line with previous research, such as McNally, *et al.* (1997) and Hodgkinson and Hodgkinson (2004b), which has established that the relationship between a teacher and a student has a significant impact on that student's learning and development. The relationship supports discussions and debates, a necessary part of shaping practice, including sharing concerns to enable the re-examining, reviewing, or clarification of practice competency. Such a relationship also creates a supportive environment that encourages both parties to take risks and explore new ways of negotiating

meaning. As the following chapter will reveal, the teachers within this study did indicate that learning was not always a one-way street from teacher to student, but they themselves on occasion gained from the presence of students in their classroom.

The findings presented in this chapter reveal the limitations of the conceptualisations of knowledge discussed in the Literature Review which categorise knowledge as discrete objects. Instead of a perspective that regards knowledge as a fixed object, to be transmitted and acquired, I found a perspective that places the negotiation of meaning at the centre of dynamic knowledge production. This social process of learning was directed by practice rather than a rigid, fixed programme and contributes towards explaining these teachers' autonomy in their work with students. Indeed within communities of practice, Lave and Wenger (1991, pp.113-4) argued that learning:

is not necessarily or directly dependent on pedagogical goals or official agenda, even in situations in which these goals appear to be a central factor... Learning must be understood with respect to a practice as a whole.

The following chapter will discuss the main priorities for learning about practice shared by the teachers in this study.

Chapter 5 Experiences within Trajectories

In the previous chapter, I discussed the manner in which the teachers in this study acted to shape a student's trajectory of participation into their communities of practice. In this chapter I will present the interrelated aspects of practice prioritised by these teachers over their time with their student.

A key matter for all of the teachers was the importance of flexibly adjusting their focus of attention onto the specific aspects of practice that an individual student most needed to develop, as illustrated in the account below:

(303): I would say to help them develop as a professional, basically. It is about teaching them and giving them the advice that will allow them to be able to be effective teachers themselves. And it depends on the student, because sometimes that might be a case of going down behaviour management routes with them. Sometimes it might be saying, 'Right, okay, you've got the behaviour management so maybe your approaches need to be a bit more innovative, maybe you're too sort of bog standard at the board'. So, it really depends but is basically getting them to kind of learn the craft and get stronger.

The teachers believed that only experience of both observing and practising could develop teaching practice. How they conceived of the terms 'experience' and 'practice' requires close scrutiny. Brookfield (1998) suggested experience does not have a fixed meaning, and for these teachers, their perceptions of the term 'experience' did have various 'stages' of meaning, including enabling students to become familiar with practice; transforming this familiarity into practice; demonstrating their competence; expand their practice; and refining their practice.

In the quotation above, participant 303 indicated that her observations were focused on tailoring her support to areas most appropriate for that student. From the findings, my argument will be that these teachers' depictions of teaching were in reference to a body of professional knowledge obtained through and embedded within their practice. Practice presents a living context for students to access competence (Wenger, 1998).

This chapter opens with a discussion of the understanding the teachers in this study expressed about the opportunities to actively engage in practice, followed by their actions in ‘manipulating’ their support to ensure students increased their participation and developed knowledge of teaching from their learning partnership. The discussion includes an examination of the different roles these teachers described playing within the learning partnership and the importance of exposure to different forms of diverse forms of practice. This is followed by consideration of these teachers’ expectations concerning how the students would use reflection to negotiate meaning. The chapter concludes with a discussion of how these teachers viewed the learning partnership as mutually beneficial.

5-1 Opportunities to Practice

As discussed in Chapter 4, the teachers in this study believed that students were required to be engaged actively in order to experience the domain of teaching. While active observation indicated the intent to participate, for a student to increase their participation required opportunities for them to practise. Consistent across these teachers’ accounts was the belief that students must have opportunities to attempt practice for themselves, to put their learning into action, as typified by interviewee 300 below:

(300): They need to get as much teaching contact as they can, and I know it is stressful, but that is how to learn. I mean, you’ll never learn to be a teacher by sitting watching other teachers, you need to do it yourself. I think that’s paramount.

Interviewee 300 emphasised that the ability to teach cannot be learned purely through lesson observations; qualifying practice needs to be attempted. Or, as interviewee 310 simply stated, “*You are not learning to drive by sitting in the passenger seat.*” This was a point interviewee 320 extended by explicitly linking learning from observation to its use in practice by the student:

(320): If someone [pupil] comes out with a wrong answer, usually first placement in the first week, they'll [student] panic. So, I have to sort of say, 'Remember yesterday when I was teaching the class, did you notice?' So, it's by linking back and modelling, and giving examples.

Interviewee 320 also explained that lesson observation does not cover all the practice of a teacher:

(320): I'll say 'Right, remember, you've got to take things like the register, let's make up some homeworks, let's mark homeworks, analyse the homeworks'. Everything that the teacher has to do rather than just standing up in front of the class and teaching, there is all these other things.

The experience of observing followed by teaching could indicate the perception that procedural knowledge contributes to professional knowledge. These teachers assumed that students' reproduction of procedures signalled that learning had occurred. This could be read as implying the practice of teaching can be reduced to actions to be learned and repeated without much cognitive engagement, the 'rote', or surface learning identified by Marton (1979). Perhaps these teachers viewed these routines as instruction to enable their student to experience success and build confidence. Wenger (1998) warns that students without opportunities to negotiate meaning socially only gain localized practice and lack the understanding necessary to adjust when exposed to alternative situations. Students in this situation would be marginal participants in the wider constellation of teaching. Therefore, although routines do exist and can be useful, as discussed in the section 2-7, in reality, practice cannot remain restricted to repeating routines, just as professional knowledge cannot remain restricted to the lowest level of procedural knowledge.

These teachers did elaborate further about their conceptions of students practising teaching, demonstrating how they considered students becoming peripheral participants.

(317): They have got to learn from their own mistakes as well. They have got to learn the experience of what it is like going in that direction.

The quotation from contributor 317 above referred to ‘*learn the experience of what it is like*’. The teachers viewed these opportunities as enabling students to learn from their experience, including their mistakes. So that they can have an increasingly central role, students are required to engage cognitively to adapt their existing knowledge and understanding as opposed to surface learning (Entwistle and Marton, 1989).

5-1.1 When to Support, When to Challenge

The interdependent nature of participation and reification requires students to be directed to associate their learning with a specific aspect of practice (Wenger, 1998). The teachers in this study endeavoured to push students to move beyond reproducing memorised techniques to ask question of practice and so negotiate meaning.

These teachers were aware that students needed to realise they were learning, and participation was deepening. To this end, these teachers viewed reducing support as facilitating more meaningful experiences and ones that were representative of everyday life for a teacher. The reduction of support tended to be gradual and, like degrees of participation, not on a fixed trajectory, as exemplified by the extract below:

(316): It is a sort of team teaching sort of approach until I suss out what her weaknesses are and how reliable she is and then I will always be around, and if there is something we were doing, I would take the difficult bit and she gets the easier bit and then when I see, we will just let her have a run.

Interviewee 316 thus suggests that a student’s participation is increased in reaction to *that* student’s ability to cope with “easier bits” with no predetermined timeline or sequence of events.

Various opportunities for support occurred before, during, and after lessons. Before a lesson, the teachers considered that reducing their advice in relation to activity selection or method increased the responsibility of students. This encouraged necessary independence and expanded students' experience, as exemplified by teachers 319 and 317:

(319): I like to think that I am not somebody that would say, 'You don't want to do it that way'. I am actually quite curious to see how it goes because it could be better than my way or they [pupils] could pick it up better. But, if both the student and myself feel that it hasn't worked out, or it hasn't gone right then it is probably a case of chatting about it and looking to see if it is worth going over it again. Maybe do[it] a slightly different way..

(317): If they discover themselves that actually, that wasn't a good thing then that is good reflection on them and we will try another approach another time.

Both extracts also point out the role of reflection and that learning from mistakes was necessary for students, just as for pupils.

During the lesson, all the teachers in this study considered their presence in the room inhibited increased independence, as exemplified by the quotation below:

*(305): ...If, on the other hand, there was poor classroom control I wouldn't let it get to a stage of damaging their confidence, but I would let it run because they have to experience it. But the chance of that happening with me in the class is slim, but there is still a possibility there and it is that reaction and they need to be aware that all kids react differently and *they* need to experience that before they go to their probation year, so they know how to handle it. ... It's important these youngsters [students] actually have an opportunity to be *the* main person in the room, to be the sole focus. And is also important for the young people [pupils] in the classroom, not to turn round and look for help from the person they know can do it, but to call on the student ... and they [student] can't fully do that unless they have got some alone time with the class. They can't do that, because there is the constant reassurance, there is somebody else in the room.*

While the teacher in the account above believes their presence ensured good pupil behaviour, it also indicates their belief that experience of a degree of unrest enables deepening participation. As discussed in Chapter 4, this suggests a sense of responsibility towards students' development. Notice how the teacher remaining in the room could prevent the student's movement towards more central participation. Legally, the teacher is responsible for the safety and learning of the class yet these teachers did withdraw their perceived influence within a lesson when they felt that a student had appropriate competence, as described in the quotations below:

(315): It depends on the class, but often, maybe, after a couple of weeks, you pop out for 5 minutes and get something, that sort of thing. You wouldn't really, you'd be next door. That sort of thing. Definitely not in the first 2 or 3 weeks, halfway maybe...

(311): It's not a time limit ...it depends on the person. If I feel, if I feel like the class is treating them well, because I do not wanna leave them [class] and then think they might start being silly that, that would be awful, so it's to do with how I think the class is relating to them [student] and how competent I think they are. I'll start off by just popping next door to get some photocopying, or whatever it is, and then. But I always say that, 'I'm out for 2 minutes', 'I'm out for 10 minutes', you know, and then and then think about maybe long distances after that. I think it is important that [being] left alone.

Within these extracts, the teachers emphasised that their absence was for short periods of time and after judging their student to be ready. Indications that a student was 'ready' could be their display of competence and their assumption of responsibility for the class, or the class treating the student as a 'legitimate' teacher. Similar to teachers conferring legitimacy, pupils make assumptions about this newcomer to their classroom drawing on both their 'usual teacher's' behaviours and their own instincts about the student, (see section 4-1 p.134).

The situations described in the preceding quotations can be seen to point up students' increasing *accountability for practice*, "the ability to understand the enterprise of a community of practice deeply enough to take some

responsibility for it and contribute to its pursuit” (Wenger, 1998, p.137). This suggests a carefully stage-managed process of learning where competence and responsibility develop together.

In the situations described above, the student was required to construct new professional knowledge to ensure their practice coped with the pressures exerted by the new challenges to their competence of being the sole teacher in the room. The understanding of this new knowledge was negotiated during the social process of post-lesson discussions, discussed in more detail within section 5-3 (p.182). To understand the new knowledge, these teachers expected students to be listening actively, making decisions, asking questions, and justifying their decisions as part of these post-lesson discussions. The student was expected to build on earlier learning, adapting their knowledge as part of a transformational process that can be seen to indicate increasing degrees of productive peripheral participation (p.155). By being given independence to explore and choose teaching practices alongside opportunities to discuss their understandings, students would have the opportunity to engage in deep approaches to learning essential to develop their personal knowledge of teaching (Prosser and Trigwell, 1997).

Within the interviews, the teachers indicated that discussions changed in response to students’ actions during and after feedback. The following sequence of quotations offers evidence of one transition. Interviewee 308 initially provided advice, a pointer, which was given to build student confidence to engage with pupils:

(308): I’d say, ‘Learn names early’ and I give them plans with all the names on. I encourage them [student] to learn the names early because that make such a difference to them [student], to speak to the kids by name because kids really like that.

The advice illustrated above was interpreted as gentle encouragement, giving the student a focus to begin their involvement with pupils. This teacher then illustrated how they continued to increase student participation over the placement, negotiating the move towards greater independence:

(308): I would ask the student and say, 'Would you want to have them on your own for tomorrow? You have been doing this here' and I think that's all part of that really.

The potentially challenging question asked by interviewee 308 below revealed a focus on encouraging students to share their decision-making processes, to articulate their private reflections and give them the responsibility to deal with situations, all of which are part of increasing participation.

(308): When those two start mucking about over there, how were you thinking of managing that?'

It was clear from this study that these teachers took control of their actions with students, guided by their personal professional knowledge rather than acting on outside advice. Their feelings of autonomy for increasing students' participation were evident throughout the interviews. The teachers' tone of voice and body language were very matter of fact in some of their responses, which I interpreted as indicating that they were not looking for approval nor feeling they had to justify themselves, as the next extract demonstrates:

Question: Is there anything in particular that you thought that maybe I would have asked you about that I haven't?

(317): No, honestly, my mind was open and you were able to pillage whatever is in my brain... I forgot how much I actually enjoy looking after students.

The teachers' forms of expression conveyed how they focused upon the learning needs of students and did not look to the school hierarchy for direction or permission for their actions. Their expression transformed as they began to talk from within themselves using a reflective tone; and, at times, they questioned themselves out loud as well as pausing to think back and probe their own logic, as the following extract from interviewee 311 illustrates:

(311): *If I thought I didn't know how to deal with a student, I guess I've never thought that, but I guess I'd get hold of you [as university tutor]. ... You get that guidance pack ... But it is a bit kind of rules and regulations, isn't it, 'They need 15 hours of this, et cetera'. ... you don't really get any guidance on what might be an appropriate way to [talking to self], I know that they are dealt with quite differently at different schools, thinking about my last student, I know that at her last school, it was quite prescriptive and I'm quite a lot the other way and ...*

Question: *You mentioned there that you know that schools do things differently with students, be more prescriptive, being less prescriptive. Do you think that is a good thing or a bad thing?*

(311): *I don't think it's a bad thing, I just think it's life ... Obviously, I think my way is the best [we both laugh] but... I think [talking to self] *that* is just life, yes, of course. I think that there is a good reason for not getting any information about what to do with them, because you come across a different variety of managers, we are just people, so I think maybe it's useful...Hmmm, how could you [talking to self]...I suspect people, I suspect teachers would rebel, wouldn't they? If I'd got a pack saying, 'You must leave them for 15 minutes after two weeks or, whatever', you know, no, it's not going to work is it?*

The participants' willingness to share and examine their practice with students expressed during the interviews indicated that they did not want a top-down approach from either school or university bureaucracy, but were open to constructive dialogue, support, and ideas as equal partners with university tutors. While concerns around the quality of both professional development and placements were issues raised in the Literature Review, the autonomy expressed by the teachers in this study shaped the nature of their contribution, bolstering their goodwill and engagement with students, which arguably we should be careful to preserve. I will return to this point within the Discussion chapter.

5-2 Diversity in Practices

Having recognized that students “are dealt with quite differently at different schools” (interviewee 311), this section explores diversity at play in more detail. While this diversity within and across different schools could be viewed

as a flaw in the current system, the teachers' comments during their interviews suggest a more complimentary picture.

During analysis, it became apparent that these teachers consider teaching practice as comprising of two principal elements that I have labelled 'procedures' and 'style'. I use the term 'procedures' to represent the implementation of policy procedures, including the guidelines for teaching viewed as appropriate and necessary by the school or department, alongside codified material of procedural knowledge (the 'what' that makes up practice). The term 'style' represents the distinctive style or tactics/quirks developed over time that distinguishes teachers as individuals, ('how' the individual executes the 'what').

In relation to students gaining familiarity with local practice, both elements were evident in the teachers' accounts. For example, the following quotation exemplifies interviewee 308 identifying different styles for communicating with pupils:

(308): I just tried to show them what the job is really, and I suppose when they [student] come in to observe, I would hope that they see the way you engage with the pupils, say, compared to another teacher. There is multiple styles out there and I think for a young, beginner teacher, they need to find the style that is going to work for them, so hopefully they [student] would see that and benefit from a whole range really, different schools and teachers, that's what [it's] all about really.

While the account above made clear that styles differ between teachers, which requires students to consider what style is best for themselves, interviewee 305 was more explicit in expecting students to be intent on participating, actively observing and reflecting upon what they see:

(305): They should be observing everybody along the corridor [maths department] and picking up tips from every single teacher and things they would do and things they wouldn't do.

Both of the extracts from teachers 308 and 305 made reference to expecting students to make decisions as a result of observing. Indeed, all the teachers

regarded reflective skills as a dimension of practice, encompassing the belief that students are expected to interpret practice individually to form their personal professional knowledge. However, none of the teachers referred to checking out that the students had in fact made appropriate interpretations of the practice they had observed.

These teachers' perceptions mostly incorporated the idea that the more styles students are aware of, the more adaptable and successful their own style would be. Interviewee 320 articulates this thought very clearly:

Question: how does the student that leaves relate to the student that had arrived six weeks earlier?

(320): Well I'd like to think to say there is a huge improvement, well, maybe not an improvement, but a change because they have got to develop their own teaching style and it might be a little bit from me and a little bit from there, and a little bit from there, and it's evolving the whole time.

Another participant noted the importance of a student being exposed to the variety of approaches within an *individual* teacher's practice, and believed that teaching did not involve a fixed, 'one size fits all' approach:

*(311): I think it's really important for them to see you teach as well, you know, the kinds of things *you* might do with this *particular* class I think is incredibly useful for a teacher as well.*

This extract can be read as stating that competent practice is fluid, responsive to the pupils in the room, and as expecting students to reflect actively upon what they are witnessing as part of peripherality.

Pursuing this theme, the following extract highlights the distinct value of diversity in, and fluidity to, practice when describing a typical scenario between colleagues within the participant's department:

(310): We [staff in department] talk about 'best practice' and how we can approach things and try and knock ideas against each other and sometimes a person's idea doesn't kind of really suit everyone, but ... we

are in a department where everyone is kind of receptive to new ideas. I would like to think that the student came in, they could see that and it is kind of part and parcel of what the Department is all about.

Here interviewee 310 explicitly highlights not only departmental colleagues' acceptance of diversity across their teaching practice, but also their collective engagement in sharing and debating it. Interviewee 315 suggests why these debates are valuable and important for students to witness:

(315): They [students] see us talking to other members of staff and getting ideas from them, so they can realise, 'Oh, you are still learning'. It doesn't matter if you have been in the job 15 years, you are still picking up things and learning things.

This also gives students insights into the relationships between colleagues, the constant renegotiation of practice and the dynamic nature of professional knowledge. Debating different viewpoints is part of their shared repertoire (Lave and Wenger, 1991).

In addition, the following quotation exemplifies the need for students' exposure to a diversity of practice:

(300): I think they have to get, if a student came and the same teacher sat with them all the time, they wouldn't learn anywhere near as much. They need to get feedback from a range of people.

Interviewee 300 exemplifies here their awareness of the important knowledge gained through the combination of diverse experiences, and acknowledges the value of peripheral participation, and reflective discussions within one placement. The account by interviewee 317 below also supports diversity across placements:

(317): I think they should be exposed to all types of comprehensive schools from School Z, if I can say that, to... I don't know, what is the best in Edinburgh? School A! [school we are in]. I think students should be exposed to all the different types of comprehensive schools, definitely. Yes, arm them with the experience.

As illustrated by the preceding accounts, all the teachers interviewed made multiple references not just to the amount of experience but also to diversity in these experiences. This could be interpreted in multiple ways. First, as a recognition by these teachers of the influence the school context has on practice. Hence, the knowledge of teaching gained by students would be influenced by the school within which it is learned. As Eraut (2004, p.201) has stated “learning is significantly influenced by the context and setting in which it occurs.” If indeed this were the case, I suggest that these teachers are recognising that practice, or professional knowledge, is greater than one placement school could possibly demonstrate.

Second, the accounts could be interpreted as acknowledging that there is no definitive style for teaching practice, hence supporting the argument that students should experience a variety of teachers’ teaching styles to realise this for themselves. I am certain, by drawing upon my experience, that while diversity in teaching practice is widely accepted by practitioners as part of the complexity of the profession, students initially look for a ‘recipe’ for practice. Therefore, observing a variety of teacher styles may raise students’ awareness of their misconception. Certainly, by using the CoP lens, it is clear that it is not possible for a single teacher to be representative of the entire practice of teaching; and nor can the practice of one community be representative of the entire practice of the constellation of teaching (Wenger, 1998, p.111).

More tentatively, these teachers’ belief that students should experience multiple schools could be interpreted as their desire to reduce the influence of an individual school on students’ evolving practice, so as to prevent their practice being too localised.

5-3 Post-Lesson Observation Discussions

While students individually need to master the art of teaching, clearly learning to teach requires interaction with others as part of practice; you cannot be teaching an empty room. One social process, discussed in Chapter 4,

involved students observing an established teacher's practice. This played an important part in directing their trajectory into the community; and at the same time highlighted that observation featured in the *practice* of the community.

A second social process between teacher and students occurs after lessons have been taught by students. All the teachers in this study shared examples of engaging their student in discussion with the purpose of offering critique and advice on students' practice. This feedback may have allowed students to adjust their evaluation of their progress. Analysis of the interviews revealed that teachers' conceptions of these discussions could be grouped into three broad categories, which I have termed instructional, counselling, and collaborative in nature.

Looking first at *instructional discussions*, here teachers emphasised giving explicit instructions to students, as exemplified by the following quotation:

(308): 'Right, when that question was asked, you could have answered it this way' or 'this would have helped with that' or ... quite often they have got to try and deal with several [pupils] at one time who can't do it right, I'm looking around, 'these pupils can't do this so you [student] go back up the front and do that'. I would be giving them that kind of direction.

In the extract above, interviewee 308 appeared to expect students to follow direction, without student input to develop their understanding. This implies the use of the transmission model for teaching and learning, where professional knowledge is transmitted to the student, encouraging a surface-approach to learning (Marton, Hounsell and Entwistle, 1997). It also suggests a hierarchical relationship, with a focus on technical aspects of practice rather than individual strengths or weaknesses of students. Viewed through the CoP lens, the participant teacher appeared to want consistency in practice between themselves and a student for the benefit of pupils, prioritising pupil learning.

Second, there were *counselling discussions*, where students were encouraged to be involved in discussions to explore their understanding of the advice that was being given. For example, in the following quotation the student was given an option to ask questions and given a “seed” to explore as opposed to the one fixed instruction in the extract above:

(300): It is more being like a sounding board so they can, they can come to you for support rather than expect us to tell them what to do, I think that may be that is the slight difference ... You'll say to them, you'll plant the seed.

Presenting themselves as being available to counsel and provide options to consider, the participant is giving their student some autonomy to decide and a deeper experience upon which to reflect. By giving options, the participant begins to build students' independence and trust in their own judgements. Teachers were aware that students need exposure to the complexity of the situation, which requires knowing a range of possible actions and their potential outcomes (Dewey, 1910). The teacher offering options from which the student can select simultaneously scaffolds their learning and exposes the complexity thus introducing students to, and helping them to develop, the strategic knowledge discussed by Shulman (1986), Gott (1988), and McCormick (1997).

The third category, *collaborative*, was where a teacher and student worked together in a more equal fashion to develop teaching practice. The quotation below illustrates where ‘we’ need to ask for advice:

(303): Then it is just about ‘Right, this is maybe an area that we can kind of look at’ and gain suggestions and gain help and gain extra support as opposed to saying ‘Well, actually your starter that wasn’t very good there’.

Collaborative discussions are characterised by the teacher using language that includes both the student *and* themselves as learning, and are designed to help the student to realise that they are included in the community. The participant was acting as a critical friend or, using Feiman-Nemser’s (2001)

term, 'educational companion', establishing a much less hierarchical relationship to develop reflective skills. By using collaborative discussion, these teachers are positioned as 'agents of change' (Feiman-Nemser, 2001, p.1032) and the deliberate act of collaboration draws students deeper into the teacher's community.

In addition, the interviews demonstrated that these teachers did not apply rigidly one discussion category. Relationships, discussed in section 4-3, influenced the type of interaction between teacher and student, and vice versa, along with balancing the tensions between prioritising pupil and student learning. For example, returning to an earlier quotation from interviewee 305:

(305): I am not there to solve all their problems and, even if I can see a problem looming, sometimes I will step back and I won't say that's going to be an issue. I'll let that happen, because then the learning points from that afterwards with the discussion will be along the lines of, 'What went well and what doesn't go so well? And what did we learn from that? And what will you do in the future about it?' And hopefully the phrase will be, 'I'm going to avoid it'.

The discussion began with the kind of open questions which suggest educative support (Feiman-Nemser, 1998), but concluded with leading questions that were expressed in an instructional tone, omitting any suggestion of developing understanding as to why, or how, the problem occurred or could be avoided. Yet later, when asked about giving feedback after a lesson, interviewee 305 responded: *"they just get told"* which can only be considered as instructing.

5-4 Reflection

Once students began practising teaching, implicit and explicit references to reflection appeared within these teachers' accounts. This can be viewed as unsurprising since GTCS SFR requires explicit engagement in reflective

practice for all teachers to make sense of their experiences²¹. Indeed, these teachers believed that reflection was necessary for students to combine their existing knowledge with their individual experiences from practising, as exemplified in the following account:

(305): But you cannot buy the experience of being in the classroom, you have time to reflect afterwards; and being a student, I would expect lots of time in class and the reflection takes place out of class and in your own time. ... They need more time in class and they need more time with lower ability groups.

In this extract interviewee 305 appeared to believe that the students' time in the classroom should take priority over reflection, implying that reflection was considered a task separate from, rather than integrated into, practice. Viewed from this perspective, reflection appeared inferior to experience for developing practice. Yet reflection is the cognitive processing of experiences; it helps us to understand and to learn, to transform our existing knowledge, so arguably is an essential skill for deep learning (Marton, 1979).

The expectation appeared to be that students were to reflect privately upon their participation and that this was necessary for them to discover their own style, as what works for one teacher will not necessarily work for another. Hence, reflecting in isolation would be required to understand the successes, or otherwise, of their participation. At the same time however, these teachers did view reflection as a social process with others. Interviewee 305 elaborated on their thoughts about reflection:

(305): Build in the time for reflection with colleagues throughout the day, but the more classes they can experience, the better prepared they will be for moving on.

This extract typified one facet of reflection echoed across the interviews; that reflection was not simply a private, cognitive activity. Viewed from the

²¹ Standard 2.3 Pedagogical Theories and Practice & Standard 3.4 Professional Reflection and Communication.

teachers' perspective, reflection may occur as a social process albeit secondary to actual experience in the classroom.

Part of peripheral participation involves discussing practice to generate new knowledge through negotiated meaning, which simultaneously enables the alignment of individuals' identity (Wenger, 1998). This joint knowledge and identity construction enables students to develop "their professional knowledge, selves, perspectives and practices interactively and iteratively" (Olsen, 2014, p.79). Although supporting this view, Skemp (1987) cautioned that the success of such discussions was dependent upon the relationship between the individuals involved, (discussed in section 4-3).

The following quotation reveals how a prompt to students' self-reflection might also serve as a vehicle to convey the teacher's critique and suggestions:

(306): I would ask them how they feel it went and hopefully they would self-identify and, there comes a problem if they don't self-identify and build it up. I think I would identify the issues and explain why, where the problem comes from.

Here interviewee 306 can be seen to be attempting to encourage the student to self-reflect and share their thoughts for discussion. While discussions involving critical analysis can be educative for students, developing them as reflective practitioners (Roth, 1989), they evolved alongside students' transformation as teachers in the community - a transformation that was apparent in their practice. Hence, the participant followed up by introducing their own agenda into the student's deliberations.

It was established in the Literature Review that reflection can involve different degrees of cognition and effort on the part of the individual. For deeper, more complex learning discussions must involve exploration, "turning a topic over in various aspects and in various lights so that nothing significant about it shall be overlooked" (Dewey, 1910, p.57). Collaborative support, which was of the type attempted by interviewee 306, can encourage the development of

reflective skills that enable students not only to understand but also to personalise their learning (Entwistle, 2000).

5-5 Reciprocity

5-5.1 Across Boundaries

Each of the various communities within a constellation has porous boundaries to allow multi-membership and opportunities for connecting practices, so ensuring continuity of meaning between communities within a constellation (Wenger, 1998). The following extracts conveyed how the teachers in this study conceptualised interactions with students as professional development, connecting them with practices across the constellation:

(300): I think we all get a lot out of it, so it is not just a one-way process. I think that these guys are so up on the current practices, like we all try and develop, but the best way to develop is to get ideas from other people and they [student] have got good ideas so there is a lot of positives to it.

(317): It gives me an opportunity to reflect, 'Actually, would I have done it that way?' If not, well, maybe I can guide that person in that direction. Or, 'Actually, that is a good idea'.

These extracts demonstrate that the teachers considered interacting with students as enabling the transfer of ideas into the local community. These interactions, or 'boundary encounters' (Wenger, 2000), offer a different learning opportunity to those inside the community. Sharing their learning from other communities, students introduce "a foreign competence" (Wenger, 2000, p.233) and thus assist teachers to refresh their practice to a degree. Such boundary encounters witnessed in the findings involved a range of aspects.

Students were not only useful in demonstrating specific new technologies, but were also able to refresh ideas for lessons, as these teachers explained:

(305): It has allowed me to kind of embrace the new technologies as I've gone along because I have seen them [student] use it. ...So, I've been able to get into that. For me, overall, having a student in my classroom is much more beneficial to me than it is to them.

(315): They come in with some new ideas as well, and new technology and things like that, so it keeps you more on the ball.

Sharing practices between communities forming the constellation enacts a process Wenger (1998) termed as 'brokering'. Brokering "involves processes of translation, coordination, and alignment between perspectives. It requires enough legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests" (Wenger, 1998, p.109). Both students and teachers can act as brokers when they introduce into practice insights from various communities in which they have a degree of membership, as exemplified in the following extract:

(319): I think it is good that we can learn from them, they come to us on say, their second or third placement they can bring ideas, they can get ideas from us. So, I think it is a two-way process, it is good to have.

The confidence to concede that students may reinvigorate practice through demonstrating fresh ideas and ways of working embraces the fact that that the experience does not have to be comfortable, as the following extracts from teachers 320 and 306 demonstrate:

(320): it actually makes me think about my teaching because, well, because once years ago I asked a student to watch me and said, 'Is there anything with me which grates with you because I want to know'. And the student had said, 'The way you stand, you were questioning that side of the room far more than that side of the room'. And I thought, 'Right enough'. And now, I actually consciously, I think I always did work my way around, but the majority were to one side of the room, which I hadn't fully realised, so... yes, it is a two- way thing.

(306): I know for a fact that I have my own set ways and it is nice to have them challenged even if it's not an in-your-face challenge, just another way of doing things. I think it's also good for the classes as well. The particular class that student X had, I had been teaching them for two years so it's nice for them to see another face, particularly somebody who is, because they [student] have got projects and things to do, so they are going to be doing, trying different things with them [pupils] rather than just standard teaching.

In the quotation above, note how interviewee 306 begins by suggesting their teaching practice had stagnated then progresses to indicate the freedom they gave to students in developing their teaching practice. Although expressed as beneficial for pupils, it also appears to have acted as professional development for interviewee 306. It may be that they are committed to local capacity building, evolving their local practice and being prepared to judge all new actions as potentially contributing to the community's practice.

Likewise, boundary objects assist in developing connections and learning within the constellation. For example, in the extract below the teacher obtains consent to use an artefact a student had introduced to practice:

(300): And regularly, I have said to a student, 'Could you leave a copy of that? Do you mind if we use that?' That sort of thing.

In this extract, the activity used to enhance the lesson is an artefact from another community's shared repertoire, which this teacher expressed enthusiasm to acquire. On deciding to integrate new materials, the community renegotiates the meaning of these materials to suit their practice and context. The renegotiation of meaning requires mutual engagement, resulting in the practice of that community changing, and being reinvigorated by the new ideas.

Materials adopted by multiple communities assist with giving a form of commonality across a constellation. However, each community negotiates meaning for their local context, resulting in diversity to practice – a diversity that is witnessed when individuals navigate between communities, as

discussed in Chapter 4. Examples of resource material belonging to the constellation, so open to some interpretation by each community, include the SFR and educational policies. The placement report, discussed in Chapter 4, is an example of a standardised reified artefact acting as a boundary object.

Learning from boundary encounters is deemed essential for both interlinking communities within a constellation together and ensuring their survival (Wenger, 2000). On the other hand, core members may rebuff or isolate themselves from boundary encounters, by dismissing or ignoring new experiences. Determined to keep their own ways of thinking, these individuals lack imagination thus inhibit learning and contributions to the regime of competence. Wenger (1998) considers the boundary as potentially becoming a hindrance, by closely confining learning to the local context, preventing the practice of new generations from evolving, and fragmenting of the community from the constellation. Interestingly, analysis of the interviews did not reveal suggestions of this, a point that will be returned to in the Discussions chapter.

5-5.2 Within Boundaries

Observing a student teach could also stimulate self-reflection, for example, when considering students' competence in class management and pupil learning. This is outlined here by interviewees 319 and 305:

(319): And from a personal point of view you also get to sometimes see the characters in your class in a different light because you are sitting at the back and, you know, seeing what they may be getting up to that you haven't noticed when you have been standing at the front, or whatever.

(305): Because I can sit back, and I can view my classroom, I can view the students [pupils], I can see who is working and who is not working much clearer than if I am teaching ... And that allows me to then manage my classroom by ... allowing me to pair students [pupils] or group students [pupils] together that have or are willing to be sharing help one another, so I can pick out a pair, a young person with another young person who is struggling. To that to me is the benefit of the student.

As the preceding extracts highlight, these teachers used observation opportunities to reflect upon their usual class management tactics. Interestingly, in the following extract interviewee 315 reveals a deeper consideration of their practice:

(315): I think it and think, maybe concentrate a bit more on your lesson planning. Because I think the more you teach, the less you sit down and work out a formal lesson plan, so it brings your mind back to that.

This quotation, and comparable interview extracts, can be interpreted as indicating that students not only refreshed these teachers' practices, but also reawakened aspects that may have slipped, as in the case of interviewee 315. In the preceding three extracts, these teachers learn from their self-reflections, which may have resulted in adjustments to their identity.

The teachers in this study were confident that observing students created opportunities for new learning which Wenger (1998) has deemed essential to prevent either stagnation or fragmentation of the community. Stability to practice has advantages but growth and development require flexibility. The teachers self-reflect in order to transform their practice, and possibly thereby that of the communities forming their nexus of multi-membership, demonstrates that their personalised professional knowledge has not become static or rigid.

5-6 Chapter Overview

The teachers discussed in their interviews the interrelated dimensions of experience, support, reflection, and reciprocity as contributing to both practice and learning about practice. The emphasis given to these dimensions indicated these teachers' priorities for student learning from placement.

Teachers have a collective understanding of teaching practice, which undergoes renegotiation for their school context. The teachers in this study used various forms of support to simplify student experiences and direct

students' focus to specific aspects from which to learn. The type and degree of support deployed was guided by their ongoing assessment of each student's development needs.

As highlighted by Hodkinson and Hodkinson (2004a), different practices could exist within the culture of a department. Accordingly, as the teachers in this study acknowledged, even within the same school, no two teachers are identical in their practice. The teachers in this study valued the existence of diversity within their community's practice, acknowledging the necessity for students to experience and 'try on' various styles during and across placements. Furthermore, while each teacher may be considered to have one style by the rest of community, this style to a degree is flexible as it is dependent on context, activity and class.

Such diversity can have advantages. It can demonstrate that a mutually constructed and agreed practice does not mean conformity and uniformity (Wenger, 1998). On this theme, interviewees 308 and 311 indicated that they were not expecting students simply to reproduce the practice they had observed:

(308): they need to be given space to be able to find their own rhythm.

*(311): I don't want someone to be like me, I want them to be able to teach in *their* own way.*

Nor need it create tensions and disagreement within the community (Wenger, 1998), although interviewee 315 acknowledges this is not altogether easy when students' own ideas begin to creep into lessons.

*(315): I think, later on, when they are getting through the placement and you see them doing their own thing, you *still* have the urge to want to do something but you sort of have to sit on your hands.*

Another advantage is that by identifying and questioning diversity as part of their reflections, students are pulled deeper into participation. Lave and Wenger (1991, p.115) describe the dilemma students face:

they need to engage in the existing practice, which has developed over time: to understand it, to participate in it, and to become full members of the community in which it exists. On the other hand, they have a stake in its development as they begin to establish their own identity in its future.

If students are not provided with an understanding of the reasons behind adaptations in style the diversity can have a detrimental effect, as alluded to by interviewee 320:

(320): They might go to somebody else and get completely different advice, so they don't know whether they are coming or going.

Reflection, which is an indication of cognitive engagement, was also a dimension deemed essential by the teachers in this study to allow students to develop an understanding of their experiences. Reflection was to happen both in isolation and publicly. The teachers in this study expected students to reflect independently to identify routines and activities familiar to the class while public reflection gave structure to post-lesson discussions.

The final dimension is reciprocity. Reciprocity enabled the teachers in this study, as established members of the community, to value students as new members. Learning about practice was not restricted to students since, “the move of learners towards full participation in a community of practice does not take place in a static context. The practice itself is in motion” (Lave and Wenger, 1991, p.116). Thus, these teachers reflecting upon the activities and artefacts introduced by the students were also learning.

Chapter 6 What is Missing?

The previous chapters have discussed the ways in which the teachers in this study shaped a student's trajectory into their community and the experiences they conceived as necessary for learning the practice of their community. In contrast, this chapter will explore from my own perspective as a researcher and teacher educator the subtle gaps, or silences, that I have identified in the interview data. It seemed appropriate to present and analyse all this 'material' here in this short chapter in order to avoid disrupting the main narrative the teachers focused upon.

Charmaz (2002) suggests that silences appearing within interviews can indicate significant meanings. Although she is referring to an actual silence by the interviewee, her observation can also be taken to apply to topics and issues not considered or given only very glancing attention. For the former I will continue to use the term 'silence', while for the latter I feel 'swerve' is more appropriate.

Instances of swerving a topic were identified during the interviews as occurring around making definitive decisions in the summative assessment of student competency, on specific areas of utilising students' university learning, and developing students' lesson planning skills. This was usually indicated by the participant's tone of voice when such an area arose; or by them moving the conversation on to other areas, either of which suggests that they viewed these matters to be insignificant.

The chapter begins by returning to the teachers' approach to the summative assessment of a student's practice, specifically that they swerved from making a definitive judgement of a student's competence by the end of the placement. This is followed by the consideration of how the teachers in general did not see a need to assist students to connect up their university studies with day-to-day practice. Also associated with university learning, were the teachers' lack of sustained engagement with student lesson planning skills. Finally, this chapter concludes by considering the apparent

lack of evidence within the interviews of the teachers engaging students in discussion of what the student learned from actively observing these teachers teach.

6-1 Formally Assessing Practice?

Each teacher who was interviewed referred to contributing information to the placement report. This report has the objective of presenting a summative assessment of a student's competency by the conclusion of a placement. Consistently across the interviews, the teachers described their contribution as a summary of the formative feedback that they had provided to the student over the placement period, as exemplified below:

(303): Very informal, so is just giving my feedback on areas of strength and areas of development and then it got collated...it was more what I had seen of their strengths within my classes and then, obviously ideas of areas of development...

While interviewee 303 believed their contributions were merged with others, interviewee 304 understood their comments were used slightly differently:

(304): Well, obviously every lesson a student teaches we are writing down feedback [the formative feedback given to the student], so I think that when I'm writing that information for the report down, I'm remembering where things have gone well and where things needed to be developed. ... we kind of do our own based on our class and then she [supervisor] takes parts from across all of the classes that the student taught in... It's comments only. I mean, there is, sometimes I'll put a couple of negatives down but I'm normally kind of looking to contradict it with a positive. Like I'll say, 'But then they went on to... whatever' which means they have developed from this or progressed from this. It's hard to be really, I find myself writing it in a positive tone. I would never be negative like that, I'd never say, 'Oh, they shouldn't pass this'. If there was a case of me being concerned then it would have been flagged up long before.

While interviewee 304 believed it was up to the supervisor to use their discretion to select content for the report, she emphasised the use of positive phrasing in evaluating a student's performance. The phrasing exemplified within the account below was cast in a similar vein:

(308): I think I am conscious of the report more and things like that. You keep notes as you go, the sort of things that you have been looking at and see the comments you can make like, 'You had difficulty at the start of classes, but now you are okay', that kind of thing. 'Initially you needed to find the right level' or 'awareness has improved', those kind of things you would be looking at so...

In the extract above, although noting an improvement, interviewee 308 does not state if this was sufficient. These teachers acknowledged that they used positive phrasing generally for report writing but this phrasing, combined with the supervisor's choices of aspects of practice to focus on, risks the placement report containing an unbalanced verdict on a student's practice.

A key point to acknowledge is that none of these teachers explicitly included a definitive outcome for the placement in their contributions. Instead, interviewee 304 made a compelling point: if concerned about a student's development, they would have spoken up earlier within the placement. Interestingly, when such concerns did arise, the initial reaction expressed by interviewee 311 was to check that their judgements were fair:

*(311): But I've definitely thought, 'There are things you need to do and there are things you need to think about.' More worryingly, when you've spoken to them they don't really see the benefit of that. Now I don't think I'm terribly prescriptive. I don't want someone to be like me, I want them to be able to teach in *their* own way. So, I think I'm quite liberal about that, so I do find that quite interesting when someone doesn't quite take on what you're saying. I tend then to go and talk to my colleagues and go, 'What have you found out about this person, am I way off the mark here, or what?'*

Overall, I question whether the teachers in effect treated the objective of the placement report as a summative assessment at all; and I propose that these teachers did not consider themselves as the primary assessor, leaving this role to others, articulated by participant 319 below:

(319): In the past I've kind of written, you know, sort of sentences or prose to say like, you know, factual things. . . hopefully things that they have done well, things to work on. I have never really felt that I've been the one

in the position of saying, 'Right, that person is going to be decided to be satisfactory or unsatisfactory for this placement'. I was always kind of felt that was more the decision of the supervising teacher. . . I don't really feel that I have been involved in the decisions about whether, you know, they should pass, fail or are satisfactory.

As a tentative interpretation of the data, this may in part have resulted from their awareness of how standards of competence could vary and from their recognition of the heterogeneous nature of teaching experiences. In such complex situations, without awareness of a fuller picture, Eraut (1994) suggests that individuals felt it too risky to make broad, definitive statements, instead being more comfortable to supply the necessary details of the student's practice to contribute to the broader picture. This does put the supervisor and/or university tutor squarely in the position of 'assessor'.

6-2 University Learning

Prior to each placement, the university course exposes students to theoretical knowledge, and the terminology and theories of the profession, by directing them towards academic readings as part of their journey to understanding teaching practice. Although the findings indicate that some of these teachers did afford a degree of legitimacy to aspects of university learning, the majority did not.

The teachers in this study generally held the view that theoretical knowledge was too abstract and distant from practice to be useful or of interest. When interviewee 310 was asked if his student had made reference to any theory, he replied *"He possibly did, but I never noticed"*.

In a similar vein, interviewee 317 referred to university-based learning as a theoretical ideal in tandem with suggesting that its only purpose was to satisfy the academic level of ITE:

(317): The students have to come into the schools to learn how to teach. That's probably the only time that they've got the opportunity to learn how to teach because when [they are in] the University they are learning so much about the theory. When they come into school, I find that the theory goes out the window and you are on your wits and you have to... You are sinking, you have to learn how to swim. So, I think the experiences in the schools is a must, definitely.

The participant's depiction of theory suggests they are referring to the codified-academic form of theoretical knowledge identified by Shulman (1986). Typically, these teachers limited their interpretation of theory to codified-academic material, as the following account shows:

(304): I've never really, had never spoken to a student about specifics of what the reading or what they are doing in the University or really seen it. It sounds bad ...It's more just... It probably is the way that it just naturally is, because the teaching of lessons ...but sometimes it's quite hard to link the two.

The extract shows participant 304 expressing their disdain for codified-academic material, prioritising the practical aspects of practice that they deemed to be essential for teaching. Their statement *"it's quite hard to link the two"* suggested that academic knowledge was distinct from their practical knowledge. Two observations can be made here. One is that they may not have had an awareness of how theoretical knowledge may have implicitly been informing their practice. The other observation is that they may not in general have been alert to the potential role that theoretical knowledge can play in illuminating practice. Brookfield (2017, p.171) has observed that such codified knowledge can "help us understand better what we already do and think."

On the theme of the separation of practical knowledge from theoretical knowledge, Dewey (1904, p.449), back in 1904, observed that "theory and practice are indispensable elements in any educational schema. But, as a rule, they are pursued apart". His later work attempted to understand their interrelationship. However, according to Schön (1992), not only has this

separation continued throughout the century but the distance between them has also increased.

While the teachers in this study firmly stated that the 'abstract' nature of the knowledge encountered in universities meant that it was not an appropriate topic for discussion with students, more may have been at stake here. It is possible that more forensic questioning of the teachers might have revealed a lack of confidence in either their understanding of materials from their own ITE student days or their understanding of current thinking and developments. It is also possible that they may not have acquired the metalanguage needed to frame discussion of both 'abstract' declarative knowledge and their everyday procedural knowledge of teaching and learning.

In addition, it has been noted in the Literature Review that codified-academic knowledge does not at all constitute the total theoretical knowledge of the teaching profession. Day (1999), Entwistle (2008), and Brookfield (2017) have each highlighted another dimension to theory, that which is developed by teachers from their practice. The General Teaching Council for Scotland [GTCS] includes this dimension in the Standards for Registration [SFR] (2012). This dimension of theory did not feature explicitly in these teachers' accounts, raising the possibility that they had a limited and limiting understanding of theory. As Brookfield (2017, p.172) has noted: "Our practice is theoretically informed by our implicit and informal theories about the processes and relationships of teaching".

While the teachers in this study generally drew a clear divide between university and school learning, there were a few instances where this was not the case. In the following extract, participant 306 notes how students can be enabled to put the theory encountered at university into action in the classroom:

(306): I think the universities will do a good job of teaching the theory behind it, but I think for us it is about helping them put it into practice, just letting them benefit from our experience.

Although university courses include micro-teaching²² to acquaint students with the art and craft of teaching, enabling the acquisition of pedagogical knowledge as endorsed by Tamir (1988), this is within the adult-university context rather than child-school context. While opportunities may arise to deliver micro-lessons and presentations to their peers, even the best simulations do not reflect the true reality of a classroom of pupils. Hence, I interpret interviewee 306 as believing genuine experiences transformed theoretical knowledge into the necessary skills and information required for practice. Thus, he and some other of these teachers did believe aspects of theoretical knowledge gained from university studies could influence the development of practice. Interestingly, while not explicitly referring to knowledge learned from university studies, another teacher positively referenced theory later in their interview, in relation to a student on an inward trajectory towards fuller participation in the constellation:

(311): By placement three ... you are talking more about the theory and stuff in there as well. You are much more about the pedagogy and how research might help them and stuff like that as well. Much more intellectual look at teaching rather than the nuts and bolts, yeah, definitely.

Since this participant did not appear to see theory as pertinent until the last placement of the course, their extract can be interpreted to indicate the belief that theoretical knowledge follows practical knowledge. This could mean that without experience of practice, either the theory cannot be understood or that the theory cannot be formed without the student's own actual reflection and research. I will return to this topic of theory in the Discussion chapter.

²² Micro-teaching in the local context takes the form of a student preparing and delivering (at university) a short (20min.) lesson to peers for discussion.

6-3 Lesson Planning

All the teachers in this study expressed the belief that students learn through genuine experiences in classrooms and renegotiation of any previously accumulated knowledge as they integrate into the community. These experiences were necessary for their understanding of practice to be reshaped for this department and each teacher within it. However, lesson planning appeared to be one aspect of practice where encouragement and support were limited. The following extract gives an indication of why this might be the case:

(303): Erm, to be honest, I hate lesson plans and I just find that it is one of the most... pointless exercises to get students to do because in reality, it never happens like that.

While this extract could be interpreted as the teacher not having time to write detailed plans, their statement “*in reality, it never happens like that*” may also be read as the teacher viewing lesson plans as a detailed description of practice that has yet to occur, which in their opinion renders it impractical given the unpredictable nature of teaching.

There was, however, one participant who viewed lesson plans as a record of what was taught and thought they were useful when teaching that topic again:

*(314): I try to say to them, look, here's a block of work that you can rely on, it will need adapting, depending upon the nature of the class you have got in front of you, but it should, during that probation year, (which we know is hectic), then that's a block of work that, "Oh, I did that, I can pull this out the bag now, I've taught this, it's going to be my second time teaching it so that is going to buy time for that two weeks with that class", that will make life *easier*.... So that is what I'm trying to get the student to do, to realise that how important the lesson plan is, to create a block of work that can just get them going. And if they did that with us over six weeks, you might end up with half a dozen across, obviously multitude of courses, that they could use then next year.*

Generally, references to students' lesson plans were in regard to lesson ideas, activities, or methods as opposed to planning itself, as the following quotation illustrates:

(306): For example, I looked at one lesson plan and I said, 'Oh, are you sure you want to do that, I don't know if you'll be able to'.

The quotations above indicate that these teachers read lesson plans to check on the suitability of activities as opposed to supporting the detailed preparation of effective lessons. Besides support with activities, the reviewing of lesson plans was given very limited consideration across all the interviews. Where it did occur, those teachers were explicit about their thinking:

(300): Over the course of a placement, ideally you would maybe give them a large amount of support initially, especially talking over what you would expect from their first lesson they are doing, but after that, I mean, it's nice and I understand they should have lesson plans and stuff, but if they are competent, you know, by the end of the placement you are just doing a quick, 'Are you all are right for today? What is it that you are teaching? Have you got all the resources you need?' That sort of thing.

While direct support for developing planning skills was restricted to suggesting activities or reading lesson plans, rather than the actual process, the dismissive tone used by almost all interviewed teachers supported the interpretation that they had no desire to engage in developing the planning skills of students. Participant 316 implied student observations of himself planning were sufficient, as exemplified below:

(316): I am quite structured, I like to plan things out properly so hopefully some of that rubbed off on them [student].

The phrasing used by participant 316 suggests that no actual discussion took place about planning; he appeared to think that witnessing it occurring was sufficient for the skill to become knowledge.

I would also question their interpretation of planning; was it the detailed and integrated consideration of all of the elements of a lesson or just the selection

of activities? As a teacher and teacher educator myself, I know lesson planning is more than selecting some activities or deciding on the method to use. It is a skill that needs to be developed.

The extract below is from one participant who did indicate supporting lesson planning:

*(311): I was seeing every single lesson plan, I was *seeing* every single lesson plan, but I was not asking for them in advance. At the beginning I said, you know, 'Get it to me half an hour before' or given them the option, 'If you feel you need something, you get to me in advance if you feel that you want me to rewrite it in any way, you get to me in advance. But you make that decision.' Now, if the student turned out to be do exactly what you want to do, the right things I should say, I don't want them to be like me, want to be like them, but if they do the right kind of things then I carry on with that. But I know, if it didn't feel right, I'd start saying, 'Come on, we need to pin this down a bit, get it to me in advance and let's have a discussion in advance even'. But I definitely saw all of the lesson plans, but on the day after a while, after a week, just on the day.*

It can be seen from this extract that participant 311, the only one to refer directly to giving more extended support with lesson planning, did expect students to be able to plan already and to be pro-active in asking for assistance.

Investigating further to understand why the teachers in this study felt so strongly about lesson plans, the extract below suggests a tension between teachers and universities:

(303): Sometimes the amount of, I don't know what [X university] is like, erm, we didn't necessarily have to focus so much on lesson plans, you kind of done a wee structure and that was it, but I have seen some students and they are like, two A4 pages and I'm thinking, 'That's not realistic'. So, in terms of lesson plans, it's a bit.... My personal opinion on them. I don't put as much relevance to it which maybe isn't really correct [X university], puts relevance to them, so, I don't know.

The lesson plan is the result of design, a reified task from the history of practice, while the practice it represents is these teachers' response to their joint learning. While it is possible to anticipate some aspects, the complexity

of teaching means teachers must constantly adjust their practice so as to be able to react appropriately to unexpected situations, having “an emergent structure, practice is at once perturbable and highly resilient” (Wenger, 1998, p.96).

Additionally, as a university-produced artefact, individual lesson plans may be viewed as accountable to the university, but not to the communities in secondary schools. This could explain the typical participant reaction in reference to lesson plans. These communities appear not to view the writing of lesson plans as part of their established routines of accountability, resulting in the activity being at best ignored, as was found in this study. There is considerable commonality in the lesson plan content across the ITE providers in Scotland, suggesting it could be an artefact operating as a boundary object contributing to commonality across the constellation of teaching. The lesson planning expected by the university is for single lessons that are timed to fit a single timetabled period. It has a clear beginning, telling pupils what they are intended to learn, and a clear progression pathway (or ‘story’), and an ending that checks pupils have ‘learned’ what was intended. There are boxes for: curriculum references; level of class; year group; ability; number of pupils; prior learning; differentiation; and resources, (see Appendix F). (Note: most of this is the same for each lesson with a particular class). The ‘lesson planning’ currently used in schools, however, has a distinctly different form. A ‘lesson plan’ is taken from a ‘course plan’ that centres on and dictates the order of *topics*, detailing what must be covered in the stated time-frame, (number of periods), and lists resources that are available to choose from (see Appendix G). With the increased availability of ICT, these plans are increasingly becoming electronic, with hyperlinks to the resources. Each topic is seen as a ‘lesson’ that has ‘breaks’ when lesson periods end. This allows the content to be brought forward, or pushed back, at the teacher’s discretion. Clearly, these plans have evolved over time to meet the needs of teachers within a department; and they do not necessarily contain the amount of detail or concrete instructions that a novice may require.

In reality, this study has revealed that the lesson plan was viewed to only have meaning to the university, so it was not operating effectively as a boundary object. It was an artefact transported by brokers without sufficient legitimacy to negotiate meaning and align perspectives. These school-based communities had enough autonomy to develop their own concept of lesson planning that is distinct from the university's concept. Accordingly, teachers in these communities were not particularly mindful of students' issues with planning, and were not sharing their knowledge of planning with students. This would be an ideal area for university tutors to work in partnership with teachers to construct a lesson plan format that is purposeful for all.

The situation described in the last few paragraphs can be seen to set a challenge to universities to design a format for lesson plans that encourages flexibility, building in different possible routes through a lesson. In other words, they could come up with a form of reification that would be well aligned with the realities of participation.

6-4 Learning from Observations

Within the interviews, the teachers evidenced enthusiasm for, and confidence in, their discussions of practice with students. However, whilst analysing the interview data it became apparent that these were discussions of a student's practice while giving feedback, not of their own practice after a student had observed them. This silence within the data suggests there was no expectation by these teachers of students sharing their learning from observations before they began to teach. This raised two concerns for me.

First, Rogoff, *et al.* (2003, p.177) discussed differences when learning through observation, noting: "Observers' attention is likely to be quite different if they expect to be involved than if they observe incidentally." While learning when observing is unavoidable, adding in the anticipation of participating increased the observers' commitment to concentrate. Second, McIntyre (2006) believed that following observation with discussion of the observed practice is one way in which a teacher's professional knowledge

can be made accessible to students. If such discussions had occurred, teachers' explanations could have focused students' attention onto specific actions, to ensure critical examination of what they saw and why these actions occurred.

Making observation meaningful requires consideration of the duality of reification and participation (Wenger, 1998). Participation and reification are co-dependent, interwoven tightly by the negotiation of meaning to ease communication across communities and ensure a sufficient degree of commonality. The apportioning of participation and reification during the negotiation of meaning is important as they affect the quality of the outcome. The student and teacher can be considered as participants in a community, where the lesson may be an artefact for the reification of practice. If the student learns a great amount of information about practice from the lesson, but does not get the opportunity to discuss, their participation may overwhelm reification, and any differences between teachers and students in their interpretations remain unexposed. A student's development of the conceptual understanding necessary for peripheral participation may be delayed as misinterpretations are only exposed when the student begins to teach.

Alternatively, if the student engages insufficiently and takes minimal information from the lesson, discussion opportunities to clarify meaning are beyond the scope of their learning and their understanding may remain vague. Since learning from experiences affects the content of reflections (Olsen, 2014) and students cannot reflect upon points they did not learn, this may slow their development.

While the distinct differences in professional knowledge that can be expected between a teacher and a student, may impede deriving mutual understandings from an experience (Gonzalez and Carter, 1996), engagement at the earliest opportunity in discussions is clearly beneficial. Such discussions allow students to understand the relationship between a teacher's actions and the purposes of practice and prompt mutual

engagement, thereby valuing students' input and enhancing their sense of belonging. I will return to this point in the following Discussion chapter

6-5 Chapter Overview

When it comes to the formal report, the findings indicated the teachers avoided the necessity of definitively assessing student competence by offering contributions for wording but leaving the overall decisions to the supervisor. These teachers deliberately used positive phrasing, without apparently considering that this might result in an unrealistically positive appraisal of the student's competence.

Only a small minority of these teachers referred to students' theoretical knowledge from university with any sort of respectful tone. Most of the teachers appeared to consider the purpose of theoretical knowledge was to enable students to succeed in their university studies rather than develop their practice. Another aspect the majority of these teachers restricted their engagement with was lesson planning, skimming through to check methods or resources, if at all, in the belief that this was a student task to satisfy the university course rather than a part of their own practice.

All the teachers in this study discussed with students their observations of student practice, but none of them made any reference to discussing with students observations of their own practice. They expected the student to learn from these observations but offered no direction or explanation to assist with this. This omission potentially impedes students' learning and reflection, as they may not interpret a teacher's actions in sufficient depth, or even misinterpret them.

Chapter 7 Discussion

7-1 Introduction

Secondary schools accept students on placements of 5 or 6 weeks, where teachers within a subject department offer space for these students to practise their skills. It is within this environment that students interact with staff and pupils to build upon their university learning and their understanding of teaching as a profession.

This study explored student placements from the perspective of teachers who had hosted students in their classroom using Constructivist Grounded Theory [CGT] to address the research question:

How do mathematics teachers in Scottish schools conceptualise their actions with students on placement?

This study very much started by centring on teachers' conceptions in an open way, without a hypothesis concerning what these conceptions could be. This allowed me to gain a distinct sense of the subtleties of the teachers' positions rather than being limited to a number of preformed areas of concern.

However, these subtleties presented in the earlier stages of analysis as an interconnected, indeed tangled, mass of conceptions that were very difficult to extricate from each other.

What appeared to be a tangle of conceptions was in fact hiding a very sophisticated picture, which came into clear focus when I deployed Wenger's (1998) Communities of Practice [CoP] theory. (Chapter 3 has discussed and justified the appropriateness of using CoP as a lens for interpreting teachers' conceptions of their actions.)

While Wenger's framework clearly influenced my descriptions of teachers' conceptions across the three Findings chapters, the extensive use of quotations evidences that the findings remained very much grounded in the data. Furthermore, I did not slavishly apply this lens, as at pertinent points,

critique of the lens testifies. Additionally, not being confined to a bottom-up approach to the data meant that I was alert to what teachers did not mention or took for granted which was, in certain respects, very illuminating.

Focus and structure of the chapter

This chapter will pursue three main objectives. Firstly, the central findings will be summarised under five categories that display how the research question has been addressed, drawing out comparisons and contrasts with preceding empirical studies in this domain. In addition to being an important exercise in itself, this summary also lays the groundwork for the more analytical, interpretive discussion of the findings that occurs later in the chapter. The second objective is to give a fine-grained picture of how Wenger's concepts of "trajectories" and "boundaries" apply to this study and how the study has avoided the simplistic depictions of trajectories that have been seen to mar other studies. The final objective involves taking ahead a deeper, critically reflective examination of certain paradigmatic and prescriptive assumptions that appear to underlie the teachers' accounts of their interactions with students, and their conceptions of how to respond to students. The chapter concludes with a consideration of the study's limitations, pointers towards fruitful future research directions, and a summary of insights for policy and practice.

7-2 Addressing the Research Question

Given that a substantial body of findings has been presented in Chapters 4, 5, and 6, the chapter first then summarises these categories of findings that are most centrally pertinent to the research question and that can be seen to make a contribution to knowledge. Accordingly, I discuss in this section the five categories that bring out the ways in which the current study can provide a new perspective on classroom teachers' interactions with students which has not previously been provided in the literature. These categories are teachers' conceptions of:

- students observing teachers' practice in the initial days of placement;
- post-lesson observation discussions;
- assessment;
- university taught content;
- the university requirement for lesson plans.

7-2.1 Teachers' Conceptions of Students Observing Practice

Teachers' concerns in the early days of the placement, where students observed teachers' practice, were two-fold. Firstly, building upon their initial assumptions about students, teachers took opportunities to interpret student behaviours to gauge their degree of commitment to, and interest in, practice. Teachers also instigated friendly, informal chats to probe the extent of students' competency and the gaps in their learning that needed to be addressed (section 4-1).

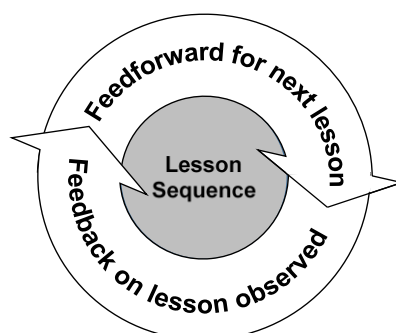
Secondly, observing teachers in action was to provide students with a general overview of practice and enable them to become familiar with school routines and procedures. This situation was consistent with what Borg (2004, p.275) describes as "apprenticeship of observation", providing students "with a powerful, albeit limited, intuitive understanding of teaching". This was 'limited' as no follow-up discussion occurred; students were "not privy to teachers' private intentions and personal reflections on classroom events" (Borg, 2004, p.274) to aid their understanding of what had prompted the actions observed (see section 6-4).

After an initial period of observation, teachers expected students to observe more intensively and to reflect on their experiences, displaying what Rogoff has termed as *intent participation* (Rogoff, *et al.*, 2003). As Day has highlighted, there is a need to reflect upon experiences if teachers are to develop their procedural knowledge and become increasingly competent in their practice (Day, 1999).

7-2.2 Progressing Practice and Conceptions of Post-Lesson Observation Discussions

Moving on from this period of observation, students then began themselves to be peripherally involved in aspects of practice. From this point onwards, teachers engaged students in a cycle of one-to-one discussions that gave students feedback on their efforts. Early discussions centred upon assisting students to understand their new school context, which is consistent with the technical support described by Feiman-Nemser and Parker (1993). Teachers then progressed to focus on students' attempts at aspects of practice, (attempts that, initially at least, had limited impact upon the core work of pupil learning). The discussions contained both feedback on the lesson observed and feedforward covering students' steps for the next lesson, as shown in Figure 7-1.

Figure 7-1 Post-Lesson Observation Discussions



Teachers described being able gradually to expose students to new experiences and challenges to enable them to master and be accountable for more of the practice. Mistakes were viewed as part of the learning experience, (see sections 4-2.3 and 5-1), rather than being prevented and corrected to safeguard pupils' learning as was the case in Fischer and van Andel's study (Fischer and van Andel, 2002, p.3).

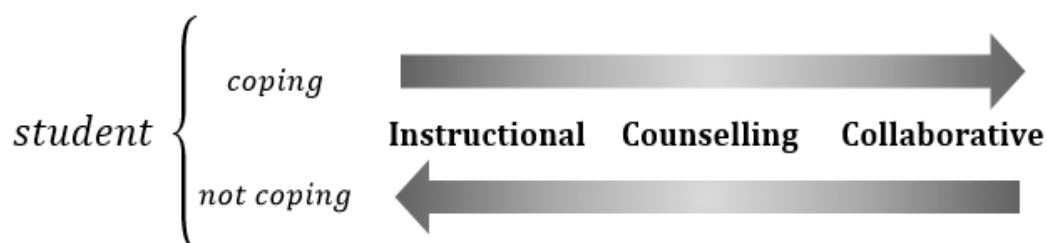
By opening up these possibilities the teachers could thus be seen to be "conferring legitimacy" (Lave and Wenger, 1991, p.92) and setting up "a form of learning in which very little direct teaching takes place" (Worthen and

Berchman, 2010, p.223). Their accounts which represented themselves as *sitting alongside* students and, for most students, drawing them into the practice of teaching by degrees resonated with Lave and Wenger's (1991, p.95) depiction of the apprenticeship of participation: "newcomers' legitimate peripherality ... crucially involves *participation* as a way of learning – of both absorbing and being absorbed in – the "culture of practice." "

As section 5-3 has illustrated, post-lesson observation discussions potentially became increasingly collaborative as teachers responded to signs that students were learning and progressing and opened up their domain-specific knowledge (Glaser, 1985).

While the relationship between teacher and students depicted by the participants in this study was not at all equal, it appeared to be both professional and friendly, dynamic, and to a certain degree reciprocal, enabling support to be provided in a flexible manner, (section 2-5). The support offered was very much in response to perceptions of how well a student was coping (see Figure 7-2). For example, when perceiving a student as struggling to apply the feedforward provided in previous discussions, the following discussions would increasingly take an instructional tone.

Figure 7-2 Category of Post-Lesson Observation Discussion



When such situations persisted, the teachers described having a negative emotional reaction and their desire to protect pupil learning, their core practice, overtook their desire to support student development, (see section 4-2.2). The teachers marginalised such a student and resorted to transmitting a fixed form of knowledge or skills more indicative of the transmission model of learning, (section 0). This scenario can be seen to fit the 'traditional'

apprenticeship model portrayed by Elder and Kwiatkowski (1993) that is marked by a hierarchical relationship.

Owen-Pugh (2007, p.83) considered the transmission model of learning and apprenticeship through participation to be mutually incompatible. Yet, in line with Rogoff's argument that the two models of transmission/acquisition and of participation can coexist (Rogoff, 1994), this study has found that one can follow on from the other. However, to manage the situation was not easy, with teachers referring to their struggles to achieve a suitable balance in their relationship that empowered students.

7-2.3 The Teachers' Conceptions of Assessment

Achieving an appropriate balance in their relationship with students, in particular between friendly encouragement and being a more distant, authoritative assessor of student practice, was also evident in the teachers' conceptions of assessment. As part of post-lesson discussions, the teachers provided a critique as formative feedback on a student's practice. They noted that giving this feedback was aided by the trust built from the friendly tone that they aimed to establish in their relationship with a student. Their friendly approach aimed to empower students to deepen their participation and to combat the feelings of disempowerment assessment may create. At the same time, the teachers spoke about maintaining a degree of professional distance in this relationship in order to feel that they were being impartial in their critique.

Teachers articulated their difficulties in balancing the amount of friendliness with professional distance, (see section 4-3); they indicated that a key concern in this balancing act was to adjust the tone and amount of formative feedback given out of concern for student welfare. While they did not see giving their critique as problematic in terms of sustaining the relationship with a student, they were aware of its potentially negative emotional impact and consequently moderated its quantity and took care over how it was phrased.

Alongside providing students with formative feedback, teachers did not shy away from providing supervisors with a summary of this feedback or from raising serious concerns about student competence. However, they avoided the responsibility of making any conclusive summative assessment of a student's practice, (section 6-1). Rather than acting as a gatekeeper, a more accurate description would be that they acted as an 'informer'.

7-2.4 The Teachers' Conceptions of University-Taught Content

Section 6-2 has highlighted that the teachers articulated students' learning as sharply divided into their learning from placement and their learning at university, what Dall'Alba and Sandberg (2010, p.105) have termed 'learning *through* practice' and 'learning *about* practice'. The teachers in this study largely downplayed the latter as they conceived of the university-taught content, the codified-academic knowledge, as being too abstract and distant from their practice. This suggests that for these teachers the professional nature of teaching is 'restricted' as learning to teach was viewed as "intuitive, classroom-focused, and based on experience rather than theory" (Hoyle, 2006, p.49).

Entwistle (2008, p.258) attributed the segregated view of theory and practice to "a misunderstanding of what theory is, especially in relation to practice". He went on to explain that the purpose of having a familiarity with theory was to stimulate critical reflection, to consider its appropriateness for application to a particular situation, not to give instruction. For theory to inform practice, it should be presented as "analytical tools" by the university (Entwistle, 2008, p.258). From my insider position, this insight will have a powerful effect on my future practice with students in their university course.

Probing the teachers' conceptions revealed that for some teachers the distinction was not so clear cut; some viewed learning *through* practice as including transforming learning *about* practice (p.200) by connecting it in a concrete fashion with the day-to-day realities of classroom life.

While critical reflection informed by theory can improve practice (Dall'Alba and Sandberg, 2010, p.117), reading theory can also confirm practice: “stumble[ing] on a piece of work that puts into cogent words something you’ve felt but been unable to articulate...is wonderfully affirming” (Brookfield, 2017, p.73).

As discussed in the Literature Review, professional knowledge is the result of reflection ‘blending’ theoretical and procedural knowledge together. Equal consideration of both is essential to fully, and correctly, understand practice (Dall'Alba and Sandberg, 2010). Thus, learning *through* and learning *about* practice become “complementary”; “to both transfer to and be reinforced in the other context” (Worthen and Berchman, 2010, p.227).

7-2.5 The Teachers’ Conceptions of the University Requirement for Lesson Plans

Lesson planning encompasses: the production of physical evidence to satisfy the university; the skill of preparing an effective lesson, tailored to the needs of pupils in the class; a record of what pupils have covered; and a record of lesson successes, (or failures), for future use, (or avoidance).

Students need to develop the skills to produce such detailed plans for real classes. Yet, teachers indicated a limited engagement with the lesson planning of students, presenting it as being too distant from the reality of their own practice, (section 6-2). Perhaps the teachers viewed this as a university assigned task for which they were not accountable. It would thus be understandable they would be disinclined to give time to discuss the task with students.

Another plausible interpretation, drawing on my insider knowledge, is that the current form of lesson planning undertaken by teachers has progressed significantly from the format that continues to be supplied by universities. For artefacts, such as lesson plans, to have meaning across communities requires that the communities are able to synchronise their perspectives of

that artefact to some degree. In the case of lesson plans, initially, teacher and university perspectives would have been coordinated. While the university took jurisdiction and reified lesson planning, teachers continued to develop the practice and coordination of perspectives reduced and discontinuities grew.

7-2.6 Conceptions of Responsibilities

This section takes a step back from the individual categories reviewed in the preceding pages to gain a more synoptic view of the teachers' sense of their responsibilities towards students. The participants represented themselves as committed to assisting students to complete their placement. Independently, and without any fuss, they undertook duties as *teacher educators*.

This presents a conundrum: Why does the teaching profession resist attempts, such as those in the *Donaldson Report* (2011), to be contractually obliged to undertake this work? This study does not have a ready answer to this question, but, it does allow me to make a number of important observations concerning the matter of a contractual obligation to guide students on placement. The teachers in this study described how they adjusted to students' commitment, readiness and competence. This dynamic, responsive interaction between teacher and student cannot readily be wholly captured within a generic formulaic statement or a 'standard' list of tasks. Accordingly, great care would need to be taken with the framing of any contractual obligation to ensure that it captured this dynamic responsive interaction with students which incrementally enabled them to progress in practising the art of teaching.

In the absence of firm policy guidelines and clear direction from management, the teachers in this study can in effect be seen to have defined their own roles and agenda. They made use of the independence, the freedom from an 'obligation' which implies that their work can be monitored, controlled and constrained. While policy documents have persistently called

for the various bodies and managers involved in ITE to clarify responsibilities and roles, these teachers appear to have achieved something the various bodies and managers could not. Quietly, and independently, they have taken, and kept, the initiative to define their roles and become clear about what they would accept responsibility for in relation to developing students. Accordingly, it would appear to be wise for any moves to introduce greater formality into the system of student placements to appreciate and build on this exercise of agency and initiative, and to avoid any straightforward top-down imposition of a set of practices.

At the same time, this degree of freedom to determine their role can be seen to carry with it certain limitations. As the Findings chapters and earlier sections of this chapter have established, left in large part to set their own agenda, these teachers did not view a number of important matters as falling within their remit. They did not feel responsibility for the lesson planning requirement dictated by the university, nor for discussing the theory taught by the university, as they deemed these to be irrelevant to their practice. As a result, they did not generally take any role in developing either students' lesson planning or students' understanding of the theory that they encountered at the university. While involved in giving formative feedback and willing to act as 'informers' to the formal process of assessing students' performance, they did not appear to enter fully into the task of formal assessment. The concluding section of this chapter will return to consider the question of how teachers might be provided with a wider vision of the responsibilities of a teacher educator.

7-3 Learning Trajectories and Boundaries

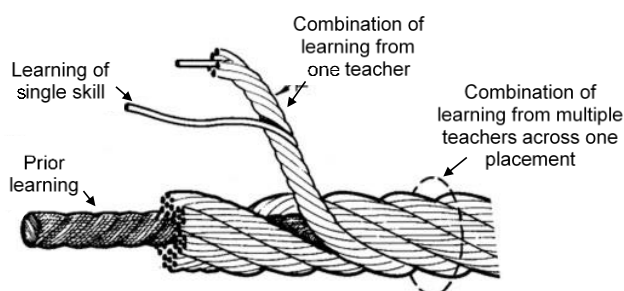
Much of the preceding literature on the supervision of students, which was reviewed in Chapter 2, has not set out to frame findings within any theoretical scheme. By contrast, this section considers how elements of Wenger's Communities of Practice framework (1998) bring into sharp relief facets of the key substantive findings of this study that have been discussed in the

preceding sections. Attention first centres on delineating how the findings concerning the teachers' shaping of students' pathways to participation can be captured within Wenger's account of learning trajectories. The focus then moves to how the distance between the teachers' communities of practice and the university community of practice can be interpreted within his representation of boundaries and of boundary crossings.

7-3.1 Learning Trajectories in Student Placements

Authors, such as Fuller and Unwin (2004) and Jewson (2007) question the presentation of apprenticeship in terms of a neat, singular linear trajectory. It would have been possible to take this straightforward path in the present study. A student's learning trajectory could be represented, as in Figure 7-3, in terms of the enmeshed combination of individual skills learnt from a single teacher intertwined with the skills learnt from other teachers.

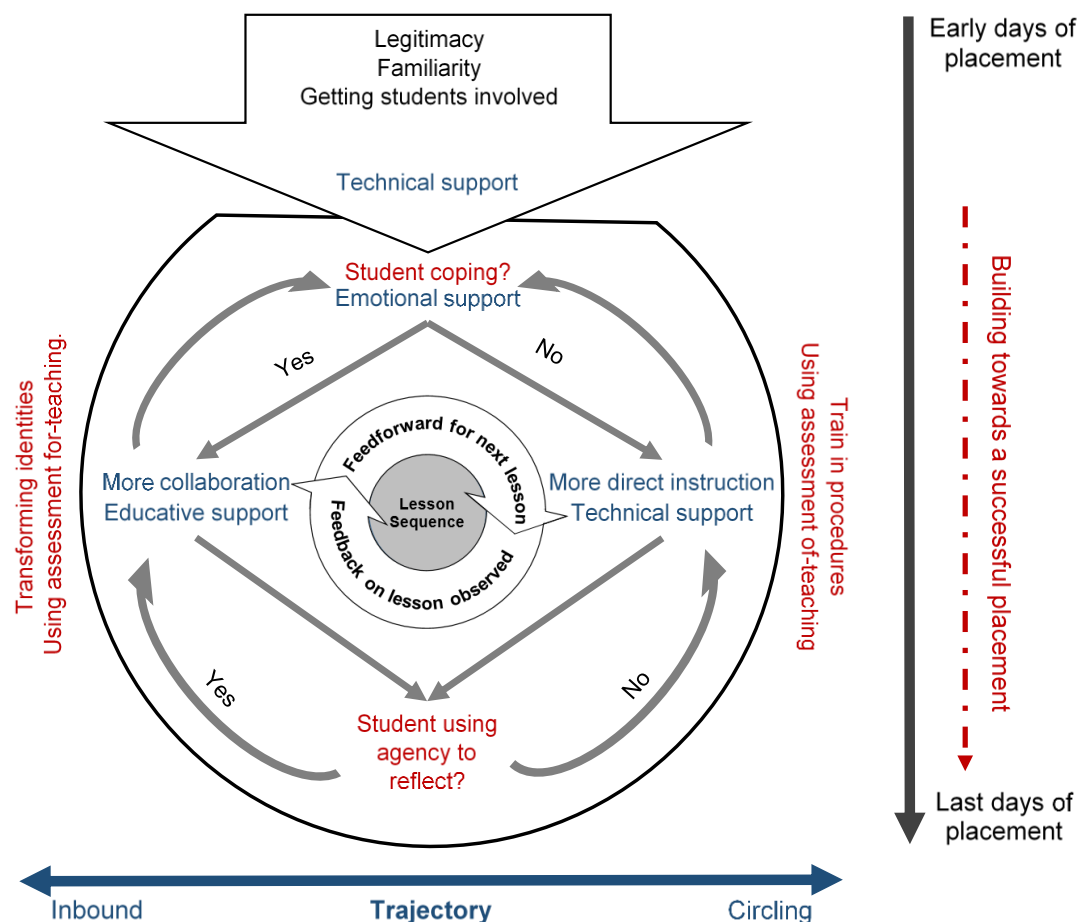
Figure 7-3 The Shape of Student Learning?



Such a representation would not give sufficient account to students' own agency in learning; and it does not mirror the reality this study has illuminated. Deeper scrutiny of teachers' conceptions revealed that they did not plan for a straightforward knowledge transfer. Consistent with Lave and Wenger (1991, p.36) and Wenger (1998), the analysis found no indications of either a singular linear trajectory or that such a trajectory was neatly planned; in fact just the opposite was apparent. What was found rather was the

dynamic combined impact of the teachers' conceptions upon the shaping of students' learning trajectories presented in Figure 7-4.

Figure 7-4 Shaping of Student Learning Trajectories



Teachers exercised considerable power over the nature of students' trajectories into the centre, onto the margins, or out of their community as they shared the living curriculum of their communities, (sections 4-4 and 5-3). Thus, this study should not be grouped with those that Jewson (2007) has criticised for presenting learning as a straightforward inward trajectory. Rather, teachers' initial conceptions formed the starting-point; and the pathway was constantly adjusted from teachers' continuous assessment of each student's behaviours and practice right until the placement period was

completed. The trajectory and learning were unique to an individual student, meaning that no two students placed in the same department would have the same learning trajectory. While it was clear that students would not all develop the same knowledge, they could be presented with similar experiences that would enable their learning to be critically reflected upon on their return to university.

Although this study focused upon the trajectory of students, as newcomers, teachers shared in detail the effects that observing students teaching had upon their own practice, (section 5-5); a number of teachers evidenced both their 'regeneration' and their embracing of the concept that "learning is as much a collective as an individual activity" (Fuller and Unwin, 2002, p.98). Thus, this study should not be grouped with those that James (2007) and Fuller (2007) have criticised for not equally exploring the trajectories of 'old-timers', an understandable concern as Lave (1996, p.162) has noted the importance of "an inclusive focus on all participants equally". These teachers were valuing the role students' play in regenerating practice, an important contribution to teachers' professionalism.

7-3.2 Boundaries and Boundary Crossing

The categories discussed in sub-sections 7-2.4 and 7-2.5 concerning university taught content and lesson plans can be viewed in terms of the challenges of negotiating connections between the practices of universities and schools. These challenges are best articulated in terms of Wenger's (1998) concept of "boundary crossings".

To understand boundaries, we need to consider where a CoP and the 'rest of the world' connect. Connections are viewed by Wenger (1998, p.103) in terms of "continuities" and "discontinuities". An individual will have degrees of continuities and discontinuities between their existing knowledge and practices and those of a community they wish to participate in. Not only do these discontinuities need to be addressed, but new discontinuities may emerge as the practices of different communities evolve and thus to a degree

diverge. Wenger (1998, p.95) considered that practice can be understood as “a dynamic equilibrium” between continuities and discontinuities. When individual communities of practice have strong interconnections, constellation of practices are formed (Wenger, 1998, pp.126-8).

Wenger’s chapter on boundaries encompasses: artefacts and other boundary objects’ ability to cross boundaries; newcomers acting as ‘brokers’ and the types of ‘boundary encounters’ they may have; and how practice itself can be “the source of its own boundary” (Wenger, 1998, p.113). Boundaries can act like sieves, each with different shaped and sized holes to separate out artefacts, objects, and newcomers into those which a CoP uses to form connections and those it rejects.

However, some authors, such as Jewson (2007, p.76), consider that Wenger’s idea of boundaries is restricted to “interactions between newcomers and old-timers”, so centred around one CoP. The findings from this study enables a different perspective by considering two distinct situations of boundary crossings.

The teachers’ previous participation in an ITE course is likely to have influenced their current identity. This means that teachers are not *outsiders* to universities but are on an outbound trajectory that increasingly distances their practice from that of the universities. Teachers are now non-participants in the work of, and the communities within the universities, no longer identifying with university practices. Hence, boundaries have formed.

The Two Situations

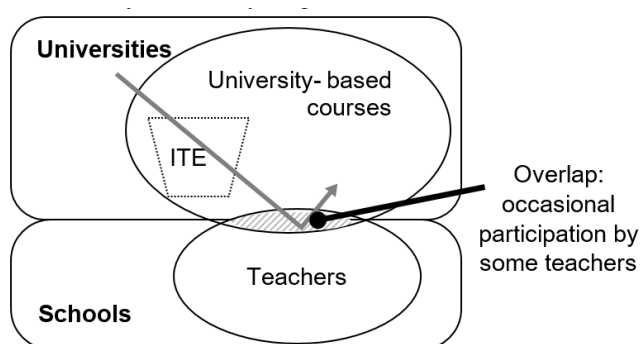
Two situations identified during this study each present different discontinuities and continuities of meaning which illustrate some of ways in which boundaries operate.

The *first* situation to be discussed involves the university-taught theoretical content. Most teachers in this study conceptualised the university-taught theoretical content, the reified form of theory, as without any recognisable

connections to their practice, (section 6-2). This lack of connection results from teachers' non-participation (Lave and Wenger, 1991). Thus, theory crossing from universities to *Teacher* CoPs is distinctly problematic. Furthermore, the use of academic language and abstractions may possibly disguise possible connections with teachers' practice, and make the boundaries between university ITE courses and teaching communities less permeable.

A small minority of teachers who did value theory had the common attribute of having returned to university study. This suggests that their separate, albeit occasional, participation in a university-based course had sufficiently impacted upon their identity for these teachers to engage with theory, as illustrated in Figure 7-5. These teachers were able to connect aspects of both practices sufficiently together to form 'boundary overlaps'. There is a danger, however, that such boundary overlaps are unable to sustain connections between both of these communities, a situation that Wenger has illustrated (pp.115-7).

Figure 7-5 Boundaries in Relation to Theory



Focusing attention on the boundaries between university ITE courses and school CoPs points up directions for development. Theoretically, the continuities and discontinuities between *Teacher* CoPs and university-based courses can form “a region that is neither fully inside no fully outside” (Wenger, 1998, p.117), providing a degree of porousness so as to open up the practice for occasional forms of participation to teachers as peripheral

participants. This is a topic that I return to in the concluding section of the chapter.

The *second* situation involves the university requirement for lesson plans. Lesson plans in their current format employed by universities originated in schools. They functioned as a standardised boundary object (Wenger, 1998, pp.106-107) that originally connected *Teacher* CoPs within the whole constellation of practice before their adoption by university-based courses.

While universities then adopted this reification of lesson planning they lacked the corresponding participation in this constellation. As a close observer of current practice in schools in my current role as a teacher educator, I have found, as noted in the preceding chapter, that the nature of planning in schools has evolved. Correspondingly, the degree to which the current format of students' lesson planning is representative of the lived experience in schools has diminished, (see section 0).

A boundary object with an increasingly precarious ability to connect with *Teacher* CoPs risks incompatible assumptions appearing and remaining undetected. One proposal could be that students provide a participative connection, negotiating the meaning of lesson planning with teachers so as to re-introduce the university's form of planning to their practice. However, whether students have a developed understanding of the value of planning for practice and have sufficient legitimate participation in both communities to act as brokers and negotiate meaning is questionable.

An alternative means of regaining the previous connections and of reworking the current lesson planning requirement, can be found in Wenger's discussion of the design of artefacts (Wenger, 1998, p.108). He notes that the "the design of artifacts – documents, systems, tools – is often the design of boundary objects" (p.108). He goes on to observe that is "imperative to consider a broader range of connections beyond the artifact itself" (p.108). The negotiation of meaning and establishment of connections can take place between 'delegations of participants' from different CoPs (Wenger, 1998,

pp.112-3). Simultaneously, the delegate teams negotiate meaning between each other and back with their community. To be successful, the delegates must be open to the boundary encounter in order to coordinate perspectives and ways of thinking. Over time, these “boundary practices” can gain “a history” and become a “form of connection” (Wenger, 1998, p.114).

7-4 Assumptions That Underlie These Teachers’ Conceptions.

The two situations examined in the preceding section can also be approached from a different and avowedly critical perspective. Brookfield has highlighted how difficult it may be to overcome assumptions that are deeply embedded in practice (Brookfield, 2017). One example of the enduring nature of such assumptions is these teachers’ belief that theory does not connect with their practice, (section 6-2). As has already been noted, teachers’ distinguishing between theory and practice is not a new phenomenon, having been observed and commented upon constantly since Dewey (1904). When teachers do not engage students in the discussion of the theory currently taught in universities, ITE and its related resources remain sited in universities. Equally, by not developing the theoretical component of their professional knowledge, teachers could be harming their own agency, and therefore be unable to challenge either their employers or the education system about ‘educational’ decisions made on their behalf.

On a more positive note, this study did uncover examples of some teachers beginning to challenge this paradigmatic assumption. Teachers who expressed some appreciation for university-taught content all had personal experience of having undertaken further study at Masters level (p.200). Typically, Masters level courses involve both critically examining research literature and researching practice. This creates opportunities for teachers to become aware of and address their misunderstandings of university-taught content; firstly that theory is not just codified-academic knowledge (Day, 1999) and secondly, that theory does not provide the answer (Entwistle,

2008), it is to assist teachers in making more informed judgements as they develop strategic knowledge (Gott, 1988).

The question arises here as to whether it was this further study that challenged the deep-rooted assumption of these teachers, shifting them towards being “extended professionals”? Or, were these teachers already “interested in theory and in current educational developments” (Hoyle, 2006, p.49) which led them to undertake the further study? Hoyle (2006) has asked, is it possible that the professional nature of teaching can be grown within those existing “restricted” teachers so that they become “extended” teachers?

Whatever the direction of influence may have been, these findings in relation to those teachers who did show some appreciation for university-taught theoretical content offer evidence for the possibility of increasing connections between theory and practice for teachers, and can be read to indicate a useful and accessible direction in which to take policy.

As the preceding section has noted, students’ immersion experiences over the initial days of placement did not appear to involve any follow-up discussion, (section 6-4). The underlying crux of the matter is that these teachers did not make students aware of the reasoning behind their actions and that the students were without the knowledge to critique the teacher (Mewborn and Tyminski, 2006; Gray, 2019). This failure to discuss their practice with students can be interpreted as belonging to the class of “prescriptive assumptions” that Brookfield has identified (Brookfield, 2017). This particular prescriptive assumption may have been formed from their personal experiences as a student and as a pupil. Whatever the origins of this assumption, what is fundamental here is the recognition that teachers replicate many practices, even those that are against their beliefs, as they do not have knowledge of alternatives (Borg, 2004, p.275). Thus, I suggest that teachers are without appropriate models for the sort of productive discussion that can take place after a student has observed their teaching.

Bringing these paradigmatic and prescriptive assumptions to the forefront of attention allows a shift in thinking around the issue of professional development concerning placements. It can be suggested that it may be important to engage with and disrupt teachers' deep-rooted assumptions. Rather than focusing professional development only on the context of placement, as seen in the Literature Review, it may be valuable to challenge teachers to think more broadly with *critical* reflection on all aspects of their practice, developing their reflective skills to be more than reflection *-on* and *-in* the action of teaching.

Staying on the theme of the critical examination of assumptions, Brookfield (2017, p.39) has defined hegemonic assumptions in the following terms: "hegemony is the process by which an existing order secures the consent of people to the legitimacy of that order, even when it disadvantages them greatly." He has also observed that: "Hegemonic assumptions are typically paradigmatic, so much a part of who we are that when they're challenged we respond, "That's not an assumption, that's just the way things are!" " (Brookfield, 2017, p.39). Applying this insight to the current study, the participants very much viewed the success of student placements to be their individual responsibility, as articulated by one participant when referring to the possibility that a student might return as their probationer the following year (p.135). In wholly taking on the responsibility themselves, it can be argued that these teachers failed to see that the current system could be challenged and adopted the attitude of getting "on as best you can within the constraints of the situation" (Brookfield, 2017, p.39). This hegemonic assumption can also be seen to make it easy for outsiders simply to blame a placement school for difficulties in a placement, and to avoid considering how difficulties may also be the result of wider, systemic issues. The concluding section of the chapter will explore how this hegemonic assumption might be weakened if a more structured, collaborative system for student placements were put in place.

7-5 Generalisability?

A modest sized sample of participants was interviewed in this study.

Accordingly, some caution is required in the claims that can be made for the generalisability of its findings. It also needs to be acknowledged that the question of the degree of generalisation that one can claim for any qualitative study, let alone this one, has been a very controverted matter. Controversy over generalisability has also been waged from very different ontological and epistemological positions. For example, Guba and Lincoln have stated flatly that “generalizations are impossible since phenomena are neither time nor context-free” (Guba and Lincoln, 1982, p.238).

A nuanced position has been taken in this debate by Williams (2002) – a position that would also seem to be particularly pertinent to the current study. Williams (2002) fully acknowledges the need for researchers to attend closely to the particularities of individual contexts, and recognises the “limits on generalization” (p.132). At the same time, he draws attention to the “cultural consistency” (p.137) that is present in a society. Accordingly, he argues for what he terms *moderatum* generalizations that “arise from that cultural consistency and are the basis of inductive reasoning in the lifeworld” (p.138). He notes that “such generalizations can be only moderate, but need only to be so” (p.139). I would argue that such, deliberately modest, generalizations may be made in the case of the current study to teachers who are working within very similar structures and cultures.

A concern throughout the thesis has been to give a very full account of these teachers’ conceptions, grounded in the interview data. This “*thick description*” (Stake, 2003, p.140), as Stake has observed, allows readers to form their own judgements on the degree to which the findings of this study may, or may not, resonate with their own experiences and contexts. Here, it will be of particular interest to see whether the paradigmatic and prescriptive assumptions identified in this study are consonant with their own observations.

Another perspective that can be taken on generalizability is the extent to which a study's findings can be drawn into a wider theoretical framework. In this study, as opposed to earlier largely a-theoretical work in this domain, Wenger's (1998) Communities of Practice framework has been deployed to bring coherence and clarity of vision to a body of findings. It will be for future researchers to determine whether employing this framework in studies on student placement will have general value.

7-6 Limitations and Future Research Directions

It is necessary to acknowledge a number of limitations that are inherent in this study. Pointing up these limitations simultaneously brings into view what may be productive research directions to pursue in future research in this field. One reason to claim only the possibility of *moderatum* generalization from this study is the fact that it only investigated teachers of *mathematics* in secondary schools. The Literature Review has examined the body of research that has revealed the shaping effects of subjects and of departmental cultures in secondary schools. Accordingly, it will be appropriate to extend the scope of this study to include teachers of other secondary school subjects to detect commonalities and any contrasts in their conceptions of student placements and of how best to interact with students. Given the differences in culture, noted in the Literature Review, between primary and secondary schools, work on how current primary school teachers conceive of student placements would also seem to be required; and there would be value in a study that compared the conceptions of primary and secondary school teachers concerning this topic.

While the study has set out to give a voice to teachers who host students on placements, not solely, as in preceding research, to those with the designated role of supervisor, it has not been able to research how students themselves represent their experiences of placements. Ideally, one would wish to set up a 'matched paired' study where a student and a teacher each present their perspective on a particular placement. It needs to be recognised

though that negotiating the ethical challenges posed by such a project might be problematic. However, a design comparing the conceptions and experiences of a cohort of students on placement in a cluster of schools and those of the teachers with whom they were located should not present the same challenges.

In general, observational studies in classrooms have unfortunately been rare in the last few decades; and such studies have not been a feature of work on student placements. An observational study would allow one to explore the dynamic interactions between a teacher, student and importantly the pupils, and give a much more vivid sense of the lived reality of a student placement than has been achieved to date in a literature dominated by interviews and surveys.

The preceding paragraphs have appropriately acknowledged the limitations in the focus and scope of the current study and suggested how these limitations might be addressed in future research. At the same time, as the preceding section has claimed, the study's deployment of Wenger's Community of Practice framework, and its critical examination of the participants' paradigmatic and prescriptive assumptions, may provide future researchers with incisive perspectives on student placements.

7-7 Insights for Policy and Practice

This study was not designed to focus directly on policy concerning student placements and, as has been acknowledged, does not have ready answers to key policy questions about student placements. It does, however, provide a number of insights and observations that would appear to be of value to: deliberating on future policy; conceptualising professional development in this domain; and coordinating the efforts of universities and schools. Accordingly, this final section of the thesis succinctly draws together individual insights pertinent to policy and practice that have been presented earlier in the chapter.

7-7.1 Policy Makers and Educational Management

A section of this chapter has highlighted how the teachers in this study exercised agency and initiative in defining their responsibilities and taking ahead their role of guiding students on placements. Consequently, as has been observed earlier, it would be wise in any revision of the system of student placements to build up from their actions, and “to avoid any straightforward top-down imposition of a set of practices” (p.218). It has also been noted that if it were decided to introduce a contractual obligation on teachers to act as educators of students, such a contractual obligation would need to be crafted with great care if it were to capture to at least a degree, the dynamic, responsive, evolving interaction with students that this study has revealed.

While the study has pointed up these teachers’ exercise of agency in defining their role with students, it has also portrayed the disadvantages associated with their hegemonic assumption that the success of student placements was their individual responsibility. This hegemonic assumption would lose much of its force if, as has been suggested, “a more structured, collaborative system for student placements were put in place” (p.70). Such a structured, collaborative system might be distinctly difficult to achieve in education systems, such as those of the US and England, that have been balkanized but, on the basis of the analysis of policy presented in this thesis, there would seem to be the potential to introduce such a system in Scotland.

7-7.2 Universities and Schools: Potential for Boundary Crossings

In addition to bringing into focus the commitment of the participants in this study to their role as a guide to students on placement, the thesis has brought to light certain paradigmatic and prescriptive assumptions that can be seen to have limited their vision of teacher education. This finding is not construed at all in terms of teacher deficit but rather as revealing the need for wider conceptual and systemic change. Indeed, on a key paradigmatic assumption, the thesis has been at pains to emphasize how longstanding

and deep-seated the perceived divisions between theory and practice have been.

Recognizing the effects of these assumptions has led me to argue in this thesis for a widening of the focus of professional development on student placements to include engagement in critical reflection on these assumptions. This argument for the nesting of development concerning student placements within a wider, more critical, reflection on practice clearly marks a distinct shift from the development projects examined in the Literature Review which centred tightly on student placements themselves.

To take ahead the structured, collaborative system advocated in a preceding paragraph, such a programme of professional development would seem to entail the involvement of both teachers and university tutors. Drawing on Wenger's framework (1998), this chapter has considered both the challenges, and the potential for and means, of boundary crossings between school CoPs and university-based ITE staff. Here, boundary encounters between "delegations", (employing Wenger's term (1998, p.112)), of teachers and university tutors could well prove to be a productive move forward and one that could foster other "boundary practices" (Wenger, 1998, p.114).

The 'hard problem' in negotiating meaning across boundaries is clearly that of the perceived 'theory – practice' divide. Finding a way through the tangled thicket of misconceptions about theory and practice is likely to require the "hunting of assumptions" and the four lenses of critical reflection (Brookfield, 2017).

Starting at home, conducting this study has led me to recognise how my critical reflection on experiences has informed my practice to date and importantly to expand my own conceptions of what theory and practice entail. Building on this wider understanding, I will experiment with both a more explicit and more practice-aware introduction of theory to students; and I will think through how to engage with school colleagues around these matters.

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Appendices

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Appendix A Key Principles of Partnership

- *Collaborative engagement.* Partnership arrangements should be developed and implemented through the fullest possible collaborative engagement of all parties including teachers' representative organisations, or where appropriate LNCTs, taking account of local circumstances, workload and the need for consistency of approach at a local level. Partnership arrangements should foster collaboration not only in supporting the professional learning of student teachers and newly qualified teachers during initial teacher education and induction, for example, through mentoring, peer observation, learning conversations and joint seminar discussions, but also in relation to creating opportunities for teachers' career long professional learning, such as, professional enquiry and joint research activity in relation to curriculum development, the enhancement of pupil learning and school improvement initiatives and processes, with or without Masters level accreditation under the Scottish Masters in Education framework.
- *Joint assessment.* The assessment of student teachers during placement and, where appropriate, of probationers during induction should be a shared responsibility carried out in the school in such a way as to reflect the broad principle of collaborative engagement. Local discussions will determine who is best placed to take on the shared role of assessing student teachers and probationers.
- *Training and support.* Partnership arrangements should be designed in such a way as to take account of the professional support, development and learning needs of those who take on the role of mentoring, supporting and/or assessing professional learning across the early phase.
- *Need for clear and consistent documentation.* All initial teacher education and induction programmes must provide a clearly documented account of the partnership arrangements in place to ensure that student teachers and probationers to meet both academic standards and professional Standards for Registration. A common format for such documentation should be established among the universities in partnership with local authorities.
- *Career-long professional learning, including leadership development.* Through the principle of collaborative engagement the Partnership will undertake a number of developments in relation to career-long professional learning, including leadership development, to support the development of capacity and capability of the teaching workforce.

Key Principles of Partnership

Agreed by [redacted] and its Partner Authorities (City of Edinburgh, East Lothian, Fife, Midlothian, Scottish Borders, West Lothian) October 2013

The key principles are as follows:

- *Quality of Student Learning Experience.* All partnership arrangements should be aimed at enhancing the quality of the learning experiences of teachers in the early phase of their professional learning and arrangements should include a clear commitment to the evaluation of the impact of these arrangements not only on the learning of student teachers and newly qualified teachers, but also, importantly, on enhanced pupil learning.
- *Clarity.* All partnership arrangements should ensure that the roles to be adopted by the different parties are clearly stated and understood by all concerned.
- *Reciprocity.* The arrangements made for partnership should be based on the principle of reciprocity and care should be taken to ensure that there are clear reciprocal benefits to the schools/local authorities and the universities.
- *University Academic Standards.* All partnership arrangements must ensure that the resultant student learning can be assessed by processes that meet the universities' quality assurance standards.
- *Professional Standards.* All partnership initiatives must have due regard to the professional standards and guidelines set out by the General Teaching Council for Scotland (GTCS), in order to ensure that programmes may be fully accredited by the GTCS.
- *Continuity.* Partnership arrangements should be designed in such a way as to enhance the continuity between Initial Teacher Education (whether through an undergraduate Degree programme or a PGDE programme) and Induction. This will entail collaborative working on all aspects of the student and probationer experience from initial recruitment to meeting the Standards for Registration.

LNCT – Local Negotiating Committees for Teachers

Appendix B Questionnaire for Participant Background Information



THE UNIVERSITY of EDINBURGH

Profile Questionnaire

Name:..... School:.....

Contact email address:.....
Participant code:

Participant code:

Please circle to select the correct response

1. Current position held:

CL/PTC/PT Teacher Probationer CT DHT Other:|..

2. Number of years as a secondary maths teacher:

3. Number of schools you have worked in as a secondary maths teacher:

4. Please indicate your teaching qualification:

BEd PGDE/PGCE Other:

5. Please indicate your highest (non-teaching) academic qualification:

Undergraduate degree Postgraduate certificate/diploma Masters Doctorate

6. Please indicate if you are working towards another academic qualification:

N/A Postgraduate certificate/diploma Masters Doctorate

This is an area of:

7. Is teaching your 1st career? Yes No

If no, please indicate your previous career:

8. Gender: Male Female

9. In which academic year and month(s) was your most recent experience of having a student teacher timetabled to teach one of your classes?.....

10. Would you consider this a regular occurrence? E.g. every time a student-teacher is placed within the Department, they are timetabled to teach one of your classes.

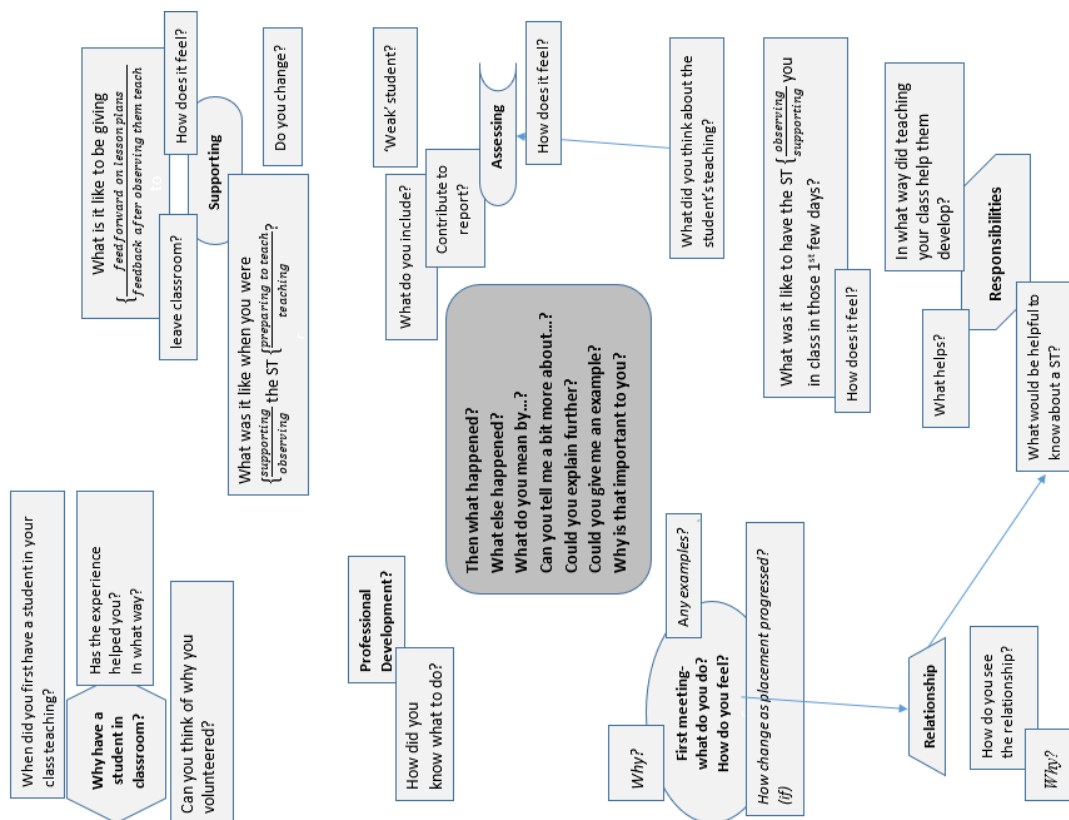
Every time most times sometimes hardly ever

11. In recent years, have you only worked with students who are from [redacted]? Yes No
If no, which other universities have you had student teachers from?.....

Appendix C Participant Data

Interviewee code	300	303	304	305	306	307	308	310	311	312	313	314	315	316	317	318	319	320	Mean	Totals
Leadership Teacher	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	14
Gender	Male	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	9
	Female																		9	
No. years as a maths teacher	9	6	8	10	11	10	20	10	7	3	10	17	24	36	9	4	19	30	13.5	
Years teaching before getting first ST		3	3	0	11	4	2	3	3	3	3	3	10	2	3	2	4	5	4	
No. schools taught in:	2	2	2	3	2	2	5	2	1	3	3	3	6	4	2	1	3	3	3	
B. Ed																				
Teaching qualification	BSc Maths & Ed	1		1						1									0	3
	PGDE/PGCE	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	15
	Other																		0	0
Highest non-teaching academic qualification	Undergraduate	1	1	1	1					1		1			1	1	1	1	10	10
	Postgrad cert/dip					1		1	1				1						4	4
	Masters	1					1				1			1					4	4
	Doctorate																		0	0
Working towards another academic qualification?	No	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	15	15
	PGDE/CE														1	1			0	0
	Masters			1															3	3
	Doctorate																		0	0
Area = Mathematics?				Y											N	N				
Teaching 1st career?	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	18
	No	1									1								11	11
School Category	State NonDen	State NonDen	State NonDen	State PC	State PC	State NonDen	State NonDen	State PC	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	State NonDen	18	18
Regular occurrence	Every time	1	1	1								1						1	5	5
	Most times			1		1		1	1	1			1		1	1	1	1	9	9
	Sometimes						1				1			1					3	3
	Hardly ever																		1	1
Only worked with X University?	Yes	1	1	1	1	1				1	1	1	1	1	1	1	1	1	18	18
	No						1	1	1	1	1	1	1	1					8	8

Appendix D Interview Guide



Interview questions by Topic Sets

Why have a student in classroom?

- When did you first have a student in your class teaching?
- Can you think of why you volunteered to have a ST in your class?
- Has the experience helped you to grow professionally? In what ways?

Professional Development

- In what ways where you prepared for having a student?
- What do you think about the placement situation? Could it be improved?

Investment

- Tell me about how you feel when student teacher initially arrives? What sorts of things do you do?
- *a Why? What happened previously for you to have these feelings?*
- *b Did your feelings change as placement progressed?*
- *c Can you think of an example where that happened?*

Responsibilities

- What did you think about the student's teaching?
- How do you think the experience of teaching your class help them develop?
- What sort of information would you like to know about a ST?
- Tell me about the responsibilities you take on towards the ST? How do you feel about this?

Sorts of support

- Tell me about your experiences during the placement:
 - *a What was it like to have the ST {observing, supporting} you in class in the 1st few days?*
 - *b What was it like when you were {observing, supporting} the ST {preparing to teach, teaching} your class?*
 - *c How would you describe or characterise the part you play each time?*
 - What are your thoughts on the ST being left alone with your class? Why?

Relationships

- Tell me about how you see your relationship with a ST, assigned to teach one of your classes?
 - *a What do you feel works (or not work at all) in this professional relationship with the ST?*
 - What would you say are the key characteristics of the role you play with a ST?
 - Do you change with different STs? Why?
 - *a Is there anything that you would do differently? If yes, what and why?*

Assessing student

- What is it like to be giving {feedback after observing them teach} to the ST?
 - *a What sort of things do you include?*
 - *b Have you had a 'weak' student? Tell me about that experience? How do you tackle the advice?*
 - In what ways do you contribute to the ST report?
 - *a How do you feel about this? Do you think it affects your relationship with a ST?*

Close:

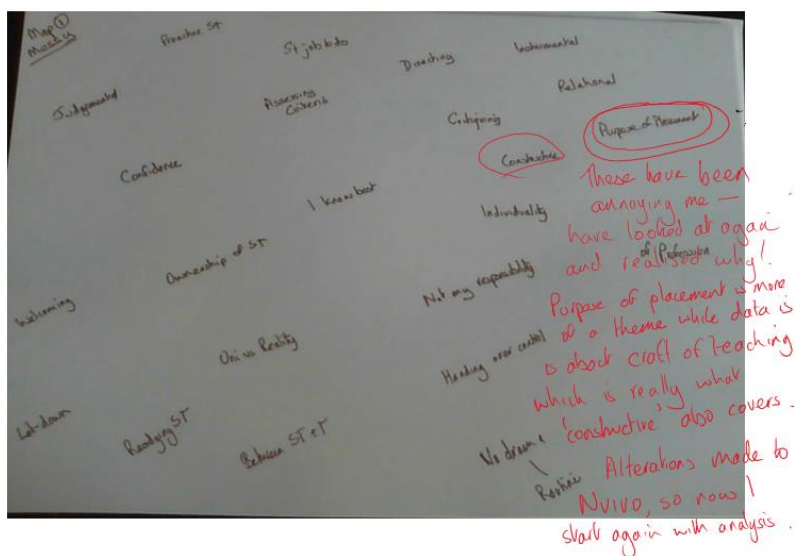
- After this period of reflection has anything else come to mind? Or strike you? That you would like to discuss?

Then what happened? What else happened?

What do you mean by?

Please correct me if I'm wrong, but are you saying....

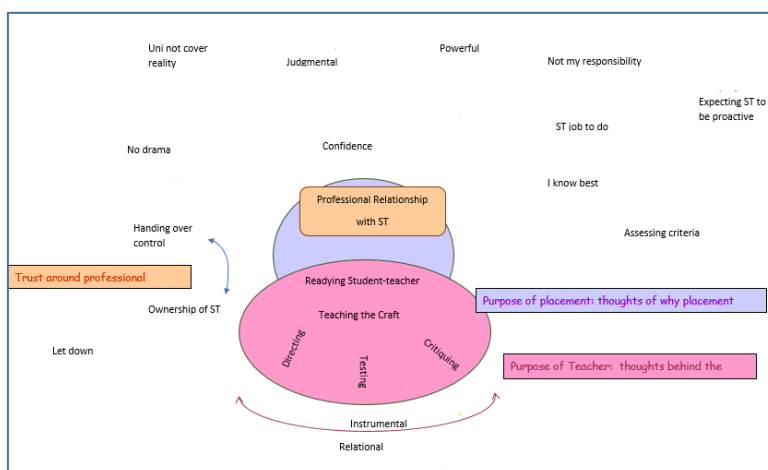
Appendix E Code Maps



Became:



Became:



Appendix F Lesson Plan Template

Lesson Plan	Date: _____ Start/end times: _____ Class: _____ Room: _____	
	Development of lesson: Include indicative timings & continue over page if needed	
Learning Intention:		
Success Criteria:		
Notes on nature of class / classroom organisation:		
Resources: What must be organized before the lesson?		
How will I provide differentiation?:		
Previous learning:	Evaluation / next steps: continue over page if needed	
Assessment:		

Appendix G Sample Section of a Department Topic Plan.

1	1.4	Geometry	The Straight Line <i>including Best Fit Straight Line and Function Notation</i>	<p>Investigation Worksheet</p> <p>R3: Chapter 16 16.1-3 Gradient 16.4 Straight Line Graphs through the Origin 16.5 y-intercept 16.6-8 Equation of a Straight Line Graph 16.9,10 Linear Equations in other forms 16.14 Equations From Graphs: Further Techniques</p> <p>Pupil Notes and Worksheets $y - b = m(x - a)$ Worksheet Line of Best Fit Functions</p> <p>R4: Chapter 3 3.1 Set Notation 3.2 Functions 3.3 Function Notation (Q1-4) 3.3 Function Notation (Q5-20) 3.4 Graphs of Linear Functions</p> <p>R3: Chapter 8 8.2 Scatter Graphs and Lines Of Best Fit</p> <p>R4: Chapter 13 13.3 Equation of the Line of Best Fit</p> <p>The Straight Line Homework & Revision</p> <p>Mixed Homeworks</p> <p>Unit 1 Revision Booklet</p>